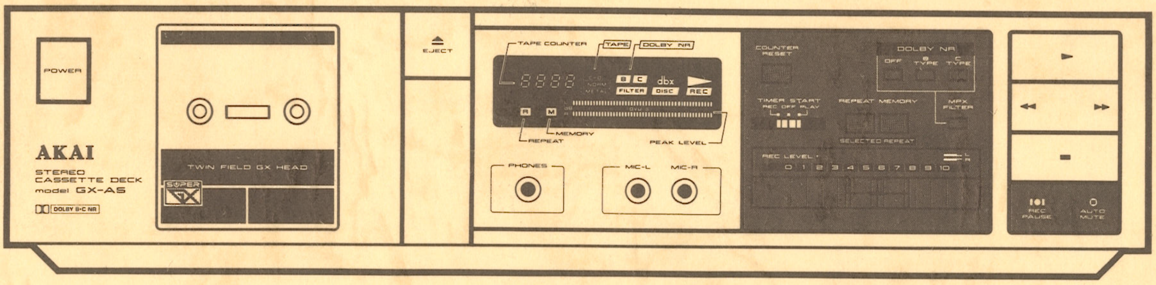
AKAI SERVICE MANUAL


POWER
AKAI
STEREO
CASSETTE DECK
model GX-A5
DOLBY B-C NR
TWIN FIELD GX HEAD
SUPER GX
EJECT
TAPE COUNTER
TAPE
DOLBY NR
NORM
METAL
B C
FILTER
dbx
DISC
REC
R
M
MEMORY
REPEAT
PEAK LEVEL
PHONES
MIC-L
MIC-R
COUNTER RESET
DOLBY NR
OFF
B TYPE
C TYPE
TIMER START
REC OFF PLAY
REPEAT MEMORY
MPX FILTER
SELECTED REPEAT
REC LEVEL
0 1 2 3 4 5 6 7 8 9 10
L
R
REC PAUSE
AUTO MUTE

STEREO CASSETTE DECK

MODEL GX-A5/X

ABBREVIATIONS FOR SERVICE MANUAL

MODEL GX-A5/X

ABBREVIATION	EXPLANATION
AC	Alternating Current
ADJ	ADJustment (ADJust)
AR	Anti Record
AS	Anti Saturation
B (B·L/B·H)	Buffer (Buffer Low level stage/Buffer High level stage)
CCA	Current Control Amprifire
DC	Direct current
DIN	Deutshe Industrie Normen
EQ	EQualizer
FF	Fast Forward
FL DISPLAY (FLD)	FLuorescent DISPLAY
FREQ	FREQuency
GND	GrouND
H	High level
HD	High Density
INT	INTerrupt
L	Low level
L	Left
MID	MIDdle
MPX	Multe PleX
NR	Noise Reduction
OSC	OSCillator
OSS (OSS·L/OSS·H)	Over Shoot Supresser (Over Shoot Supresser Low level stage/ Over Shoot Supresser High level stage)
PB	Play Back
R	Right
R (R·L/R·H)	Rectifier (Low level stage/Rectifier High level stage)
REC	RECord
REG	REGulator
RES	RESet
REW	REWind
RMS	Root Mean Square
SC (SC·L/SC·H)	Side Change (Side Change Low level stage/Side Change High level stage)
SENS	SENSitivity
SS	Spectral Skewing network
SW	SWitch
VR	Variable Resistor
VREF	Voltage REFerence

STEREO CASSETTE DECK

MODEL GX-A5/X

SECTION 1 SERVICE MANUAL 3
SECTION 2 PARTS LIST 15

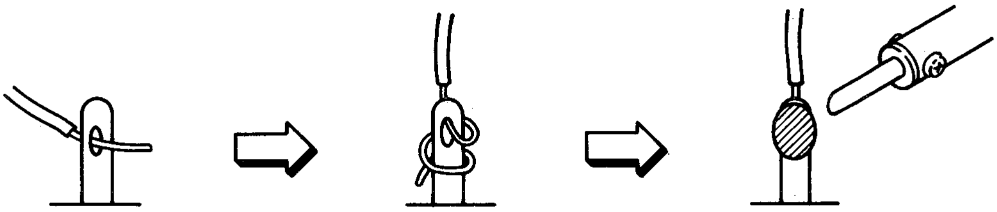
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

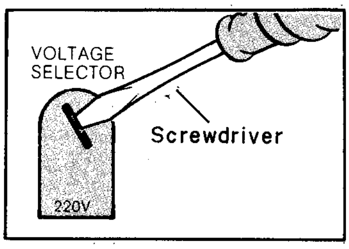
1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF .converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

VOLTAGE CONVERSION

Models for Canada, USA, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to its destination, but some machines can be set to 110V,120V,220V, or 240V as required.
If your machine's voltage can be converted:
Before connecting the power cord, turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



CYCLE CONVERSION

Cycle conversion are not necessary since GX–A5 and GX–A5X use a DC MOTOR.

SECTION 1

SERVICE MANUAL

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

MOTOR	Electronically speed controlled DC motor for capstan drive x 1
HEADS	Twin Field Super GX head for recording and playback x 1 Erase head x 1
WINDING TIME	90 sec. (C-60 tape)
WOW & FLUTTER	0.05% (WRMS), 0.12% (DIN. WTD)
DISTORTION	0.65% (Metal)
FREQUENCY RESPONSE	Metal 20Hz to 19,000Hz±3dB CrO_2 20Hz to 18,000Hz±3dB Normal 20Hz to 17,000Hz±3dB
S/N	60dB (Metal) Dolby C type NR ON: Improves up to 15dB at 500Hz, 20dB at 1kHz to 10kHz Dolby B type NR ON: Improves up to 5dB at 1kHz, 10dB above 5kHz
DYNAMIC RANGE (dbx ON)	115dB (GX–A5X ONLY)
INPUT SENSITIVITY/IMPEDANCE	LINE 70mV/47kohms MIC 2.5mV/5kohms
OUTPUT SENSITIVITY/IMPEDANCE	LINE 380mV/1.2kohms PHONES 0.3mW (at 8 ohms)/91 ohms
POWER REQUIREMENTS	120V, 60Hz for USA & Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK & Australia 110V/120V/220V/240V, 50/60Hz switchable for other countries
DIMENSIONS	440 (W) x 104 (H) x 285 (D) mm (17.3 x 4.1 x 11.2 inches)
WEIGHT	4.1kg (9.0 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

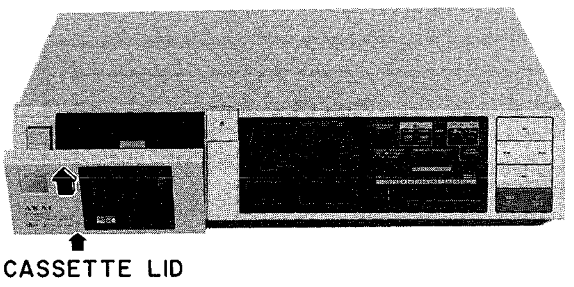
* Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation. “Dolby” and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

* “dbx” is Trademark of dbx Incorporated.

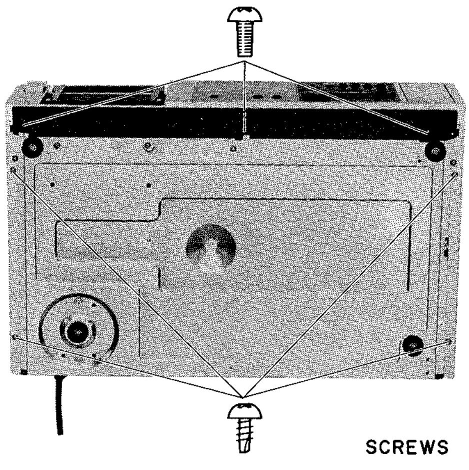
II. DISMANTRING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

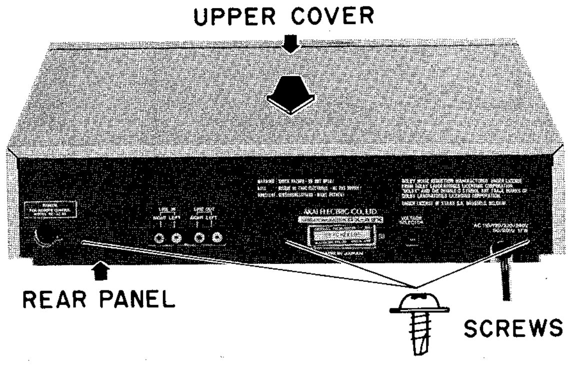
1


CASSETTE LID

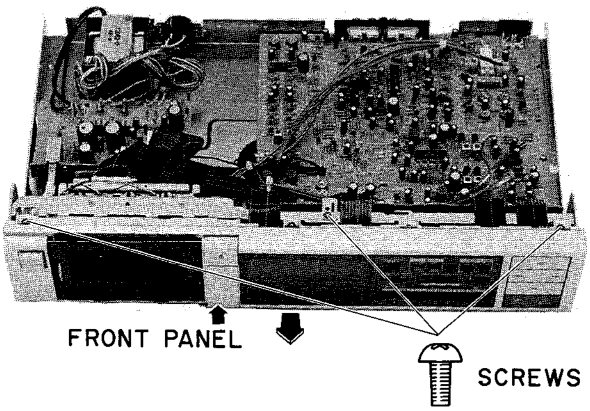
2



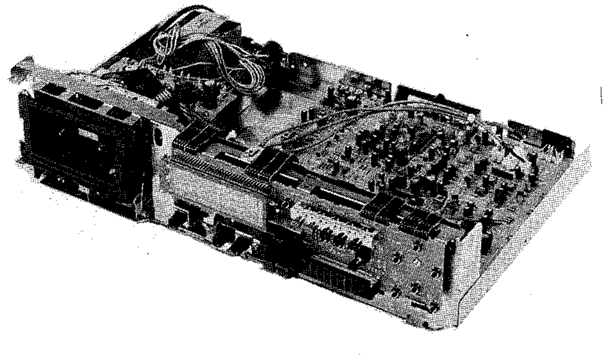
3


UPPER COVER
REAR PANEL
SCREWS

4


FRONT PANEL
SCREWS

5



III. CONTROLS

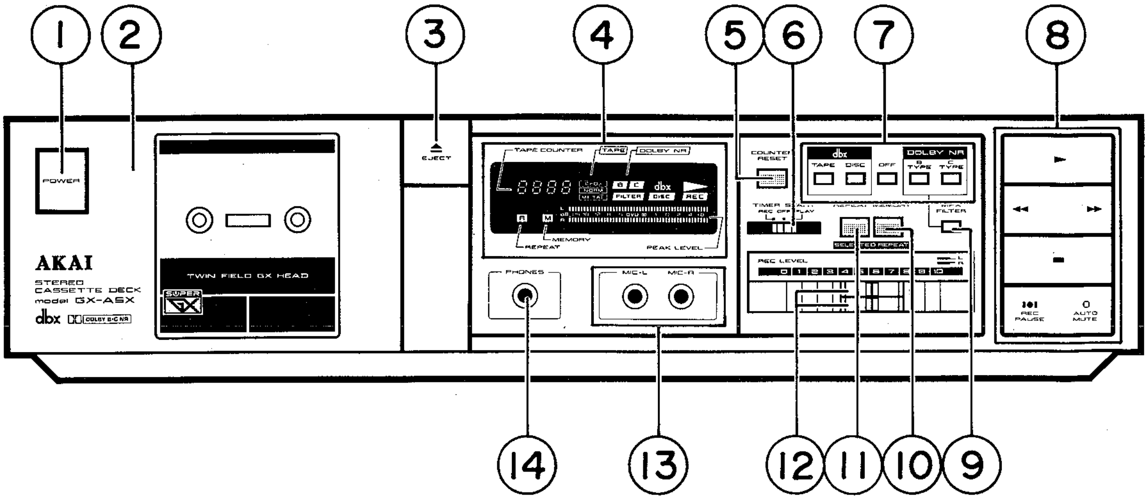

①
②
③
④
⑤
⑥
⑦
⑧
POWER
AKAI
STEREO CASSETTE DECK model GX-A5X
dbx DOLBY B-C NR
TWIN FIELD GX HEAD
SUPER GX
EJECT
TAPE COUNTER
TAPE
DOLBY NR
dbx
FILTER
DISC
REC
MEMORY
REPEAT
PEAK LEVEL
COUNTER RESET
dbx
TAPE
DISC
OFF
DOLBY NR
B TYPE
C TYPE
TIMER START
REC OFF PLAY
MPX FILTER
SELECTED REPEAT
REC LEVEL
PHONES
MIC-L
MIC-R
REC PAUSE
AUTO MUTE
⑭
⑬
⑫
⑪
⑩
⑨

Fig. 3-1 Front View (GX–A5X)

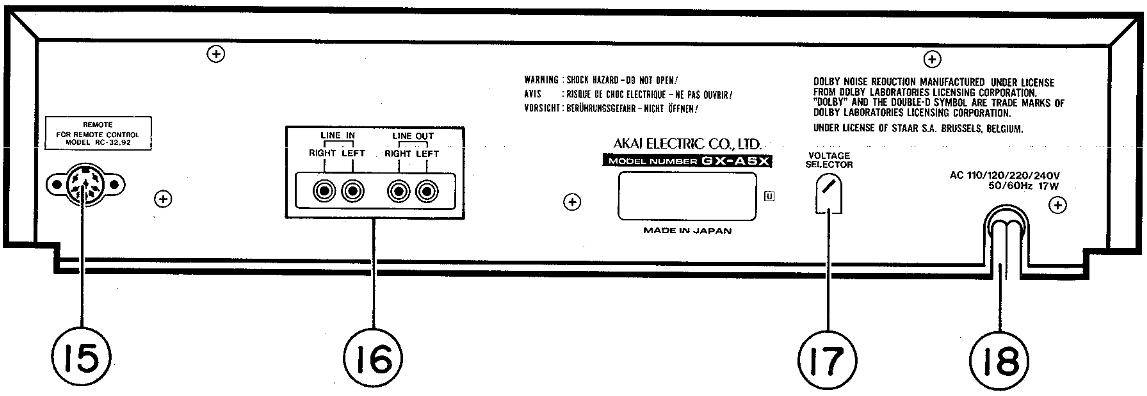

REMOTE
FOR REMOTE CONTROL MODEL RC-32,92
LINE IN
LINE OUT
RIGHT LEFT
RIGHT LEFT
WARNING : SHOCK HAZARD – DO NOT OPEN!
AVIS : RISQUE DE CHOC ELECTRIQUE – NE PAS OUVRIR!
VORSICHT : BERÜHRUNGSGEFAHR – NICHT ÖFFNEN!
AKAI ELECTRIC CO., LTD.
MODEL NUMBER GX-A5X
U
MADE IN JAPAN
DOLBY NOISE REDUCTION MANUFACTURED UNDER LICENSE FROM DOLBY LABORATORIES LICENSING CORPORATION.
"DOLBY" AND THE DOUBLE-D SYMBOL ARE TRADE MARKS OF DOLBY LABORATORIES LICENSING CORPORATION.
UNDER LICENSE OF STAAR S.A. BRUSSELS, BELGIUM.
VOLTAGE SELECTOR
AC 110/120/220/240V 50/60Hz 17W
⑮
⑯
⑰
⑱

Fig. 3-2 Rear View (U MODEL)

1. POWER SWITCH
2. CASSETTE HOLDER
3. EJECT BUTTON
4. FL DISPLAY
5. COUNTER RESET BUTTON
6. TIMER START SWITCH
7. dbx and DOLBY NR BUTTONS (MODEL GX–A5 EXCEPT dbx BUTTONS)
8. OPERATION BUTTONS
9. MPX FILTER BUTTON
10. MEMORY BUTTON
11. REPEAT BUTTON
12. REC LEVEL CONTROLS
13. MICROPHONE (L/R) JACKS
14. HEADPHONE JACK
15. REMOTE JACK
16. LINE IN/OUT (L/R) JACKS
17. VOLTAGE SELECTOR SWITCH (U MODEL ONLY)
18. AC POWER CORD

IV. PRINCIPAL PARTS LOCATION

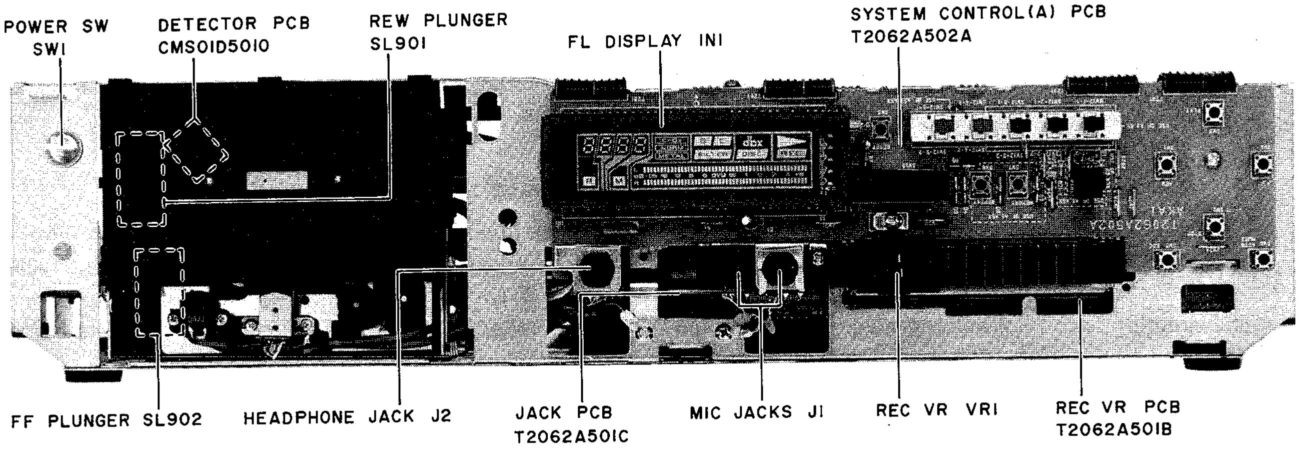

POWER SW
SW1
DETECTOR PCB
CMS01D5010
REW PLUNGER
SL901
FL DISPLAY IN1
SYSTEM CONTROL(A) PCB
T2062A502A
FF PLUNGER SL902
HEADPHONE JACK J2
JACK PCB
T2062A501C
MIC JACKS J1
REC VR VR1
REC VR PCB
T2062A501B

Fig. 4-1 Front View

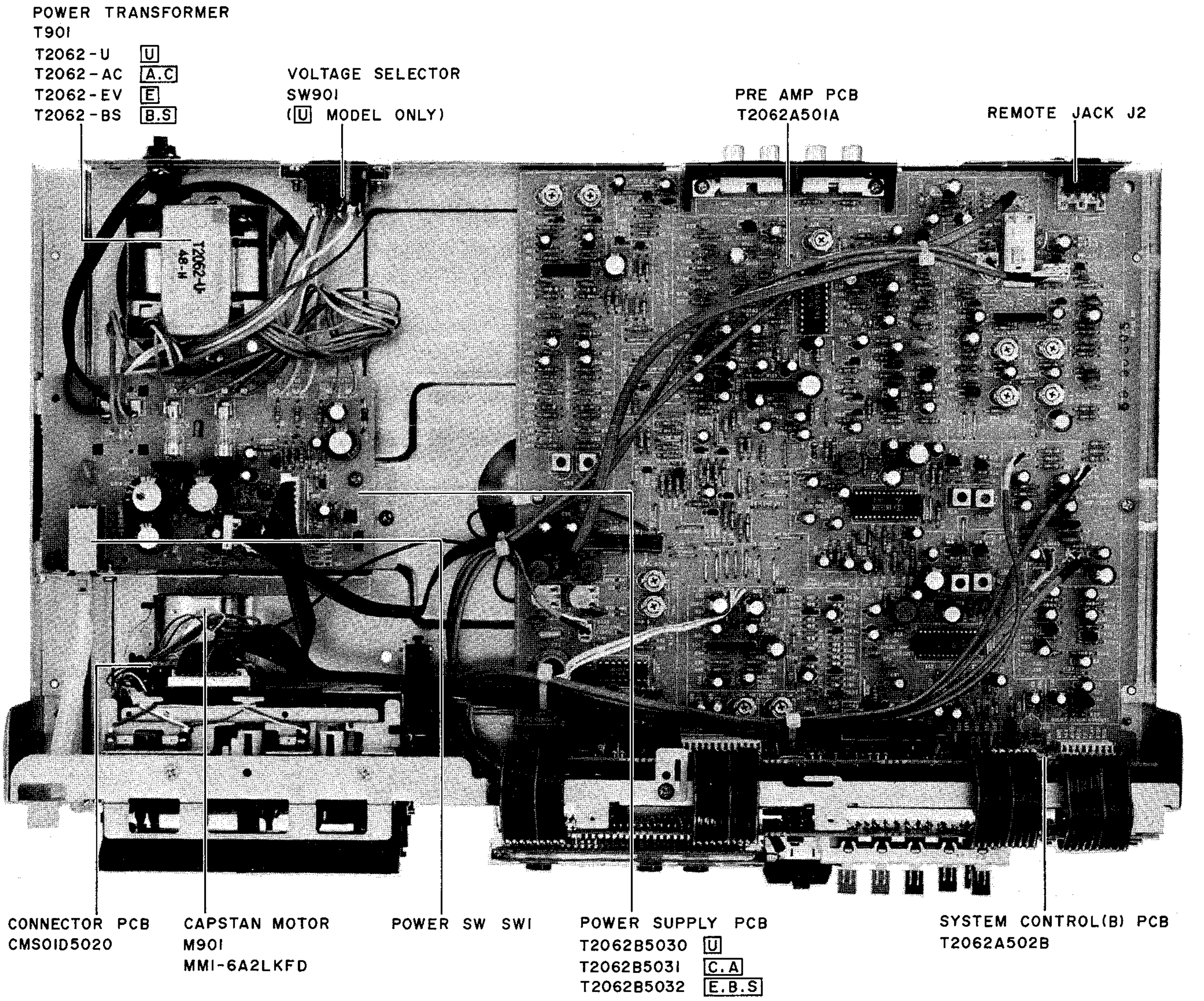

POWER TRANSFORMER
T901
T2062-U U
T2062-AC A.C
T2062-EV E
T2062-BS B.S
VOLTAGE SELECTOR
SW901
(U MODEL ONLY)
PRE AMP PCB
T2062A501A
REMOTE JACK J2
CONNECTOR PCB
CMS01D5020
CAPSTAN MOTOR
M901
MM1-6A2LKFD
POWER SW SW1
POWER SUPPLY PCB
T2062B5030 U
T2062B5031 C.A
T2062B5032 E.B.S
SYSTEM CONTROL(B) PCB
T2062A502B

Fig. 4-2 Top View

V. MEMORY-REPEAT SWITCH AND AUTO SYSTEM

S-F MEMORY REPEAT AND Z-F MEMORY REPEAT

S . . . . Start Point (beginning of tape)
F . . . . Free Point (counter point when REW and PLAY keys are pressed simultaneously)
Z . . . . Zero (0000) point of the counter.

5-1 S→F MEMORY REPEAT

The function is to playback repeatedly from the tape beginning to the free point (when REW and PLAY keys are pressed simultaneously). It can be used for repeating the first tune of the tape or one measurement.

5-2 Z → F MEMORY REPEAT

The function is to playback repeatedly from the zero (0000) point of the counter to the free point (when REW and PLAY are pressed simultaneously). It can be used for repeating a tune on the way or a certain part of a tune.

5-3 MEMORY-REPEAT SWITCH AND SYSTEM

MEMORY SW	OFF	OFF	ON	ON
REPEAT SW	OFF	ON	OFF	ON
Key input	◁◁	◁◁	◁◁	◁◁
Operation	AUTO STOP REW → (Tape End) STOP	AUTO REPEAT REW → (Tape Top) → PLAY → (Tape End)	MEMORY STOP REW → (0000) STOP	MEMORY REPEAT REW → (0000) → PLAY → (Tape End)
Key input	◁◁ + ▷	◁◁ + ▷	◁◁ + ▷	◁◁ + ▷
Operation	AUTO PLAY REW → (Tape Top) → PLAY → (Tape End) STOP	S·F MEMORY REPEAT REW →(Tape Top) → PLAY → (Free Point)	MEMORY PLAY REW → (0000) → PLAY → (Tape End) STOP	Z·F MEMORY REPEAT REW → (0000) → PLAY → (Free Point)
Key input	▷	▷	▷	▷
Operation	AUTO STOP PLAY → (Tape End) STOP	AUTO REPEAT PLAY → (Tape End) → REW → (Tape Top)	AUTO STOP PLAY → (Tape End) STOP	MEMORY REPEAT PLAY → (Tape End) → REW → (0000)
Key input	○ + ▷	○ + ▷	○ + ▷	○ + ▷
Operation	AUTO STOP REC → (Tape End) STOP	AUTO REPEAT REC → (Tape End) → REW → (Tape Top) → PLAY	AUTO STOP REC → (Tape End) STOP	MEMORY REPEAT REC → (Tape End) → REW → (0000) → PLAY

Chart 5-1

VI. ACTIONS OF SYSTEM CONTROL IC LM6504-145

6-1 ACTION OF FF AND RWD PLUNGERS

The FF and RWD plungers are controlled by the "HIGH" and "LOW" signals at Pin ㉖ and ㉗ of IC4 (LM6504-145), and the "ON" and "OFF" operation of the FF and RWD plungers activates the mechanical operation of each mode.

* The plunger is activated by the "LOW" control signal from IC4 (LM6504-145) pins ㉖ and ㉗

PLUNGER	CONTROL by IC4	OUTPUT SIGNALS			
RWD Plunger	Pin ㉖	High	Low	High	Low
FF Plunger	Pin ㉗	High	Low	Low	High

Mechanical Action	STOP	PLAY	FF	RWD

Fig. 6-1 TAPE SELECTOR OPERATION

6-2 TAPE SELECTOR OPERATION

When a cassette tape is inserted and the switches SW901 and SW902 are turned ON or OFF, the signal combination as shown in Fig. 6-2 will be input through Pins ㉝ and ㉞ of the IC4 (LM6504-145). Through the combination of "LOW" and "HIGH" at these input pins ㉝ and ㉞, the signals to control the REC equalizer, bias voltage, etc. will be output from IC4 (LM6504-145) as shown in Fig. 6-3.

Each POSITION lights at "L" output

* In Pin Nos. ㉝ and ㉞, same as in other switch inputs, when the switch is pressed, the input to Micro Computer is switched from "H" level to "L" level.

[Input]

T.S.IN METAL	T.S. IN CrO_2
Pin No.	Pin No.
(33)	(34)
L	L
L	H
H	H
H	L

Fig. 6-2 INPUT

[Output]

	Pin No.	Pin No.	Pin No.
	(30)	(31)	(32)
NORMAL	H	H	L
CrO_2	L	H	H
METAL	H	L	H
	H	L	H

Fig. 6-3 OUTPUT

VII. MECHANICAL AND HEAD ADJUSTMENT

7-1. PINCH ROLLER PRESSURE MEASUREMENT

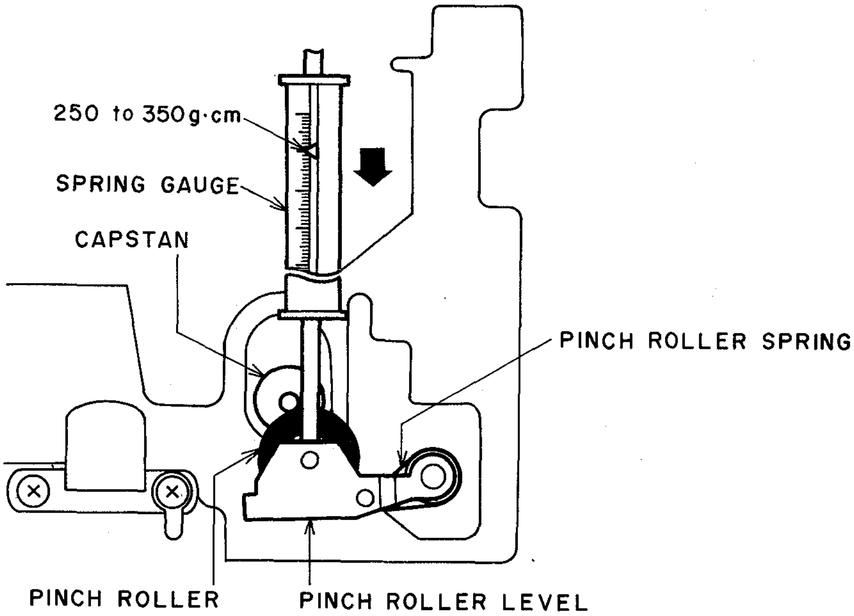

250 to 350g·cm
SPRING GAUGE
CAPSTAN
PINCH ROLLER SPRING
PINCH ROLLER
PINCH ROLLER LEVEL

Fig. 7-1

Put in PLAY mode. Push pinch roller arm down with the spring gauge, push the pinch Roller 1 to 2 mm from the Capstan and release slowly. Read the spring gauge at the moment the pinch roller touches the capstan and begins to rotate. Specified contact pressure measurement of 250 to 350 grm. If there is no measurement obtained, Adjust or Replace the pinch Roller spring.

7-2. WINDING TORQUE MEASUREMENT IN EACH MODE

Insert a cassette torque meter (AJ-751179) and measure in each mode. For Fast Forward and Rewind, measure at the end of the tape when the tape has stopped running.

PLAY mode

Take up Torque:	25 to 60 grm-cm
Back tension Torque:	2 to 5 grm-cm

FAST FORWARD, REWIND mode

Take up Torque:	70 to 120 grm-cm

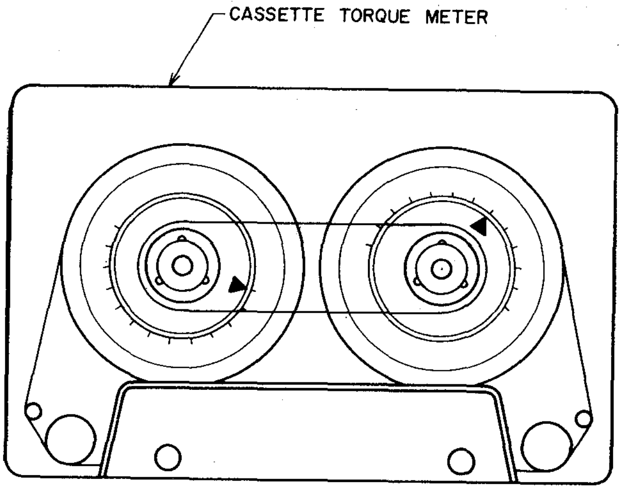

CASSETTE TORQUE METER

Fig. 7-2

7-3. TAPE SPEED ADJUSTMENT

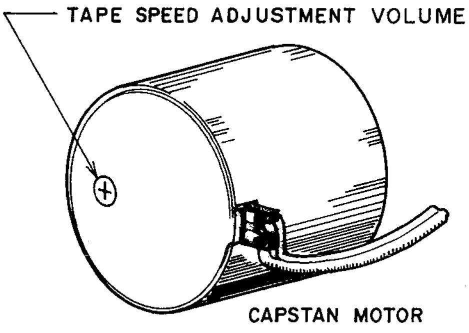

TAPE SPEED ADJUSTMENT VOLUME
CAPSTAN MOTOR

Fig. 7-3

Connect a frequency Counter to Line output terminals. Play Back a 3150Hz Tape Speed Test Tape (AT-751263) or 1000Hz Tape Speed Test Tape (AT-750774) and adjust a Tape Speed Adjustment Volume (see Fig. 7-3) to obtain a tape speed of 3118.5Hz to 3181.5Hz or 990Hz to 1010Hz.

7-4. REC/PB HEAD AZIMUTH ADJUSTMENT

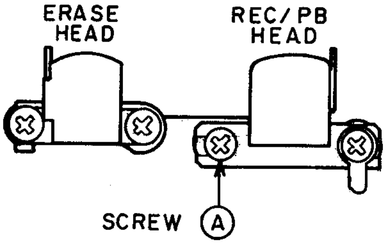
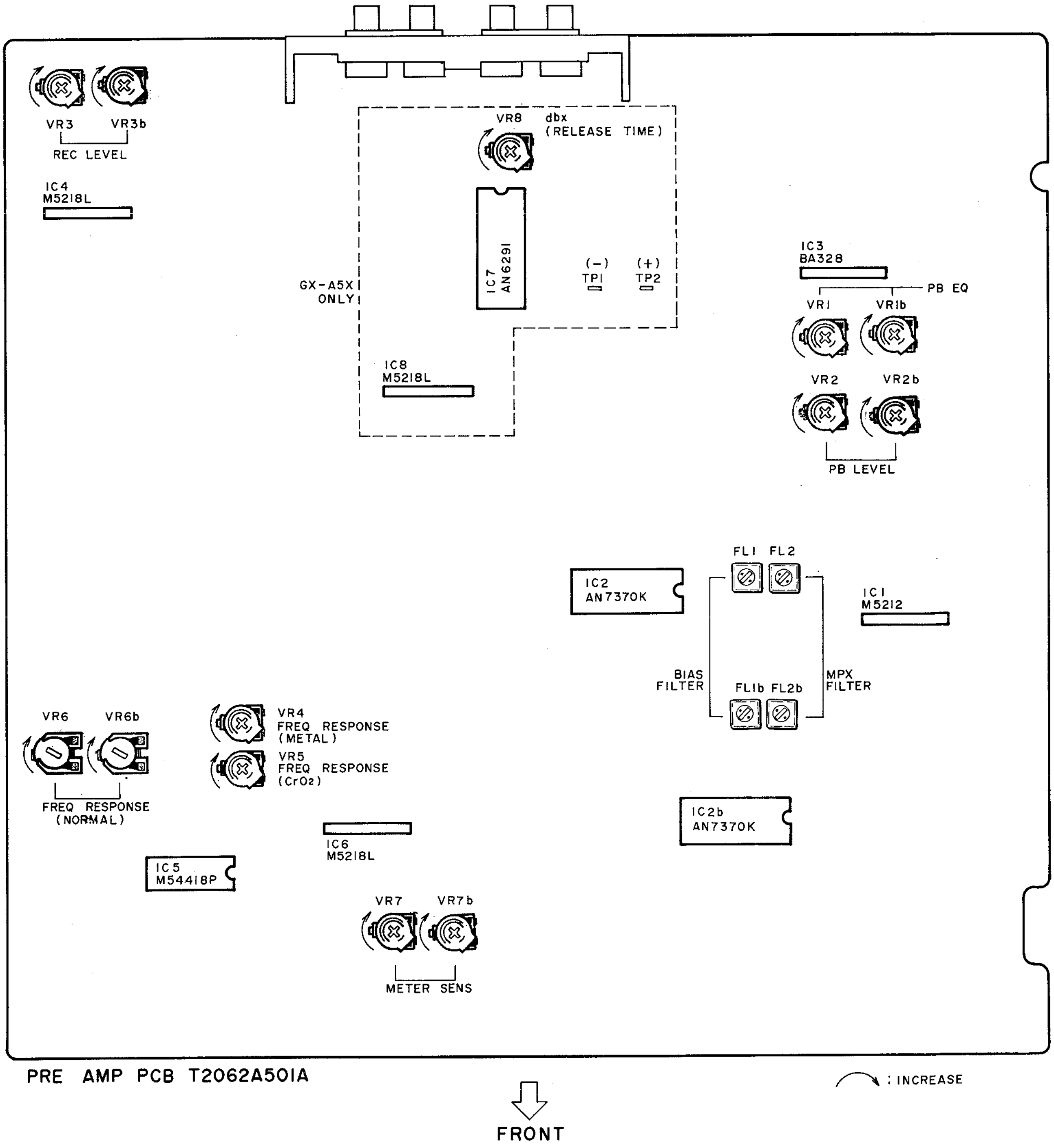

ERASE HEAD
REC/PB HEAD
SCREW Ⓐ

Fig. 7-4

Play Back a 10kHz Azimuth Alignment tape (AT-750778) and Adjsut the screw Ⓐ until the output levels of both channels are maximum. After Adjustment, paintlock the screw Ⓐ.

VIII. AMPLIFIER ADJUSTMENT

PRE AMP ADJUSTMENT POINT



VR3
VR3b
REC LEVEL
IC4
M5218L
VR8
dbx
(RELEASE TIME)
IC7
AN6291
(−)
TP1
(+)
TP2
GX-A5X ONLY
IC8
M5218L
IC3
BA328
PB EQ
VR1
VR1b
VR2
VR2b
PB LEVEL
FL1
FL2
IC2
AN7370K
IC1
M5212
BIAS FILTER
FL1b
FL2b
MPX FILTER
VR6
VR6b
FREQ RESPONSE (NORMAL)
VR4
FREQ RESPONSE (METAL)
VR5
FREQ RESPONSE (CrO2)
IC6
M5218L
IC5
M54418P
IC2b
AN7370K
VR7
VR7b
METER SENS
PRE AMP PCB T2062A501A
: INCREASE
FRONT

Fig. 8-1 Pre-Amp Adjustment

CAUTION: Connect a resistor (22 kohms) between LINE OUT and GND, while PB LEVEL, PB EQ, REC LEVEL and each FREQUENCY RESPONSE adjustments.

Step	Adjustment Item	Test Tape & Supply Signal	Mode	Adjustment Point	Result	Remarks
1	PB LEVEL	315Hz or 333Hz	PB	VR 2 (Lch) VR 2b (Rch)	–6.0±0.2dBm or –6.6±0.2dBm	
2	PB EQ	10kHz	PB	VR1(Lch) VR1b(Rch)	–21.0 ±1.0dBm	
3	Normal Position Frequency Response	Normal Blank Tape 1kHz, 10kHz –26.0dBm	REC/PB	VR 6 (Lch) VR 6b (Rch)	1kHz, 10kHz Flat ±0.3dBm	
4	CrO₂ Position Frequency Response	CrO₂ Blank Tape 1kHz, 10kHz –26.0dBm	REC/PB	VR 5	1kHz, 10kHz Flat ±1.0dBm	
5	Metal Position Frequency Response	Metal Blank Tape 1kHz, 10kHz –26.0dBm	REC/PB	VR 4	1kHz, 10kHz Flat ±1.0dBm	
6	REC LEVEL	Normal Blank Tape 315Hz –6.0dBm	REC/PB	VR 3 (Lch) VR 3b (Rch)	–6.0±0.5dBm	
7	BIAS Filter	Metal Blank Tape No Signal Input	REC or REC PAUSE	FL 1 (Lch) FL 1b (Rch)	Less than –46dBm	
8	MPX Filter	Normal Blank Tape 19kHz, 0dBm	REC PAUSE	FL 2 (Lch) FL 2b (Rch)	Less than –35dBm	Set DOLBY NR SW to DOLBY-B or DOLBY-C.
9	Meter Sensitivity	Normal Blank Tape 1kHz, –6.0dBm	REC PAUSE	VR 7 (Lch) VR 7b (Rch)	OVU INDICATION	
10	dbx (Release Time)	NO SIGNAL Blank Tape	STOP	VR 8	15mV±0.15mV	HX-A3X ONLY. Set the dbx SW to dbx disc. Connect the digital voltmeter between TP1 (–) and TP2 (+).

NOTE: 1. Above adjustment except for step 8 and step 10, adjustment should be made with Dolby NR and dbx at OFF POSITION.

2. Use the following cassette measuring tapes:

NORMAL TAPE :	Maxell	UDI	C-60
CrO₂ TAPE :	TDK	SA	C-60
METAL TAPE :	TDK	MA	C-60

3. Refer to Fig. 6-1, for above adjustments.

IX. DC RESISTANCE OF VARIOUS COILS

PARTS	DESIGNATION	DC RESISTANCE
PB/REC Head	PR4-7TG	650 ohms ±10%
Erase Head	HJ213270	3.5 ohms
Solenoid	0730PLT	144 ohms ±10%
Relay	LAB2NS	1000 ohms

X. PC BOARD TITLES AND IDENTIFICATION NUMBERS

MODEL GX–A5

PC BOARD TITLE	PC BOARD NUMBER	REMARKS
PRE AMP PC BOARD	T2062A501A	
REC VR PC BOARD	T2062A501B	
JACK PC BOARD	T2062A501C	
SYSTEM CONTROL (A) PC BOARD	T2062A502A	
SYSTEM CONTROL (B) PC BOARD	T2062A502B	
POWER SUPPLY PC BOARD	T2062B5030	U
	5031	C,A
	5032	E,B,S
CONNECTOR PC BOARD	CMS01D5020	
DETECTOR PC BOARD	CMS01D5010	

MODEL GX–A5X

PC BOARD TITLE	PC BOARD NUMBER	REMARKS
PRE AMP PC BOARD	T2062A501A	
REC VR PC BOARD	T2062A501B	
JACK PC BOARD	T2062A501C	
SYSTEM CONTROL (A) PC BOARD	T2062A502A	
SYSTEM CONTROL (B) PC BOARD	T2062A502B	
POWER SUPPLY PC BOARD	T2062B5030	U
	5031	C,A
	5032	E,B,S
CONNECTOR PC BOARD	CMS01D5020	
DETECTOR PC BOARD	CMS01D5010	

SECTION 2

PARTS LIST

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Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

ARDS.

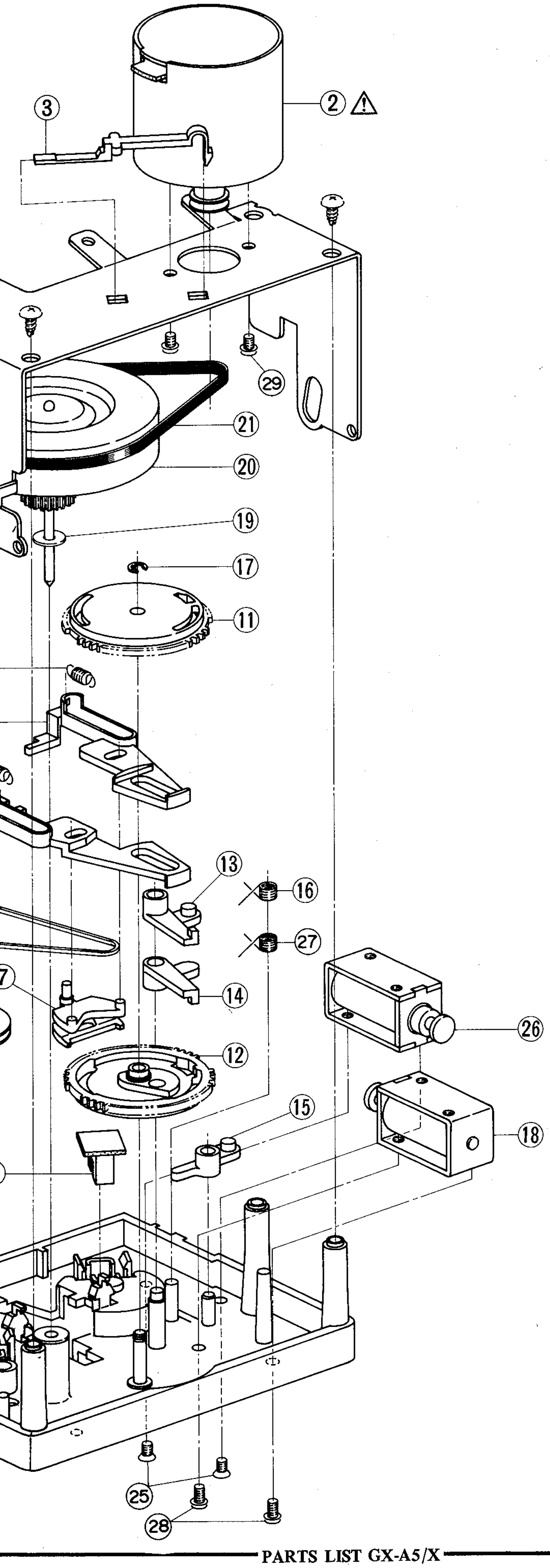
RDS.

4. PRE AMP PC BOARD (GX–A5)

REF. NO.	PARTS NO.	DESCRIPTION
4-IC1	EI-337228	IC M5218L0
4-IC2	EI-354821	IC AN7370
4-IC3	EI-349590	IC BA3280EC
4-IC4	EI-337228	IC M5218L0
4-IC5	EI-349388	IC M54418P
4-IC6	EI-337228	IC M5218L0
4-TR1,2	ET-349705	TR 2SC2320 E,F,G
4-TR3	ET-350795	TR 2SC3399
4-TR4	ET-200986	⚠TR 2SD863-V8 F
4-TR5	ET-308141	TR 2SC2603 G
4-TR6,7	ET-338324	TR 2SD1012-V H
4-TR8	ET-348302	TR FET 2SK381 C,D
4-TR9	ET-349705	TR 2SC2320 E,F,G
4-TR10	ET-338324	TR 2SD1012-V H
4-TR11	ET-200986	⚠TR 2SD863-V8 F
4-TR12	ET-338324	⚠TR 2SD1012-V H
4-TR13, 14	ET-308977	TR 2SC2274K F
4-TR15, 16	ET-338324	TR 2SD1012-V H
4-D1	ED-301911	D SILICON H DS448
4-D2	ED-309341	D GERMA H 1K34A
4-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05
4-RL1	EQ-337067	RELAY LEAD LAB2NS 2N0 18V
4-VR1	EV-345781	R S-FIX H RVF8P01 3P 202
4-VR2	EV-338588	R S-FIX H RVF8P01 3P 503
4-VR3	EV-337993	R S-FIX H RVF8P01 3P 203
4-VR4	EV-344109	R S-FIX H RVF8P01 3P 102
4-VR5	EV-337992	R S-FIX H RVF8P01 3P 502
4-VR6	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
4-VR7	EV-338588	R S-FIX H RVF8P01 3P 503
4-VL1	EO-337055	COIL VARI 1 FE002S 10MH
4-FL1	EH-351182	FILTER DB 201AK-005 100kHz
4-FL2	EH-351183	FILTER DB 201AK-006 19kHz
4-FL3	EO-337044	COIL TUN 1 102AZ-005
4-FL4	EO-315758	COIL TUN 1 100Z-431 100.00kHz
4-T1	EO-354820	COIL OSC1 32-5030-12 100KC
4-FR1	ER-318248	⚠R FUSE ERD2FC S10 1/4W 47R0G
4-C3	EC-347364	C MC V F05 FE92 8R0D 500DC
4-C12	EC-314990	C STY V S05 CQFS 101J 50DC
4-C60,61	EC-357103	C PP V F05 CQMFS92 682 G 100DC
4-C62	EC-321583	C PP V F10 PFH 102J 630DC
4-J1	EJ-347664	PIN J YKC21-5053 P 4P
4-J2	EJ-346076	DIN J TCS4690-01-1111 P 8P

5. PRE AMP PC BOARD (GX–A5X)

REF. NO.	PARTS NO.	DESCRIPTION
5-IC1	EI-337228	IC M5218L0
5-IC2	EI-354821	IC AN7370
5-IC3	EI-349590	IC BA3280EC
5-IC4	EI-337228	IC M5218L0
5-IC5	EI-349388	IC M54418P
5-IC6	EI-337228	IC M5218L0
5-IC7	EI-354822	IC AN6291
5-IC8	EI-337228	IC M5218L0
5-TR1,2	ET-349705	TR 2SC2320 E,F,G
5-TR3	ET-350795	TR 2SC3399
5-TR4	ET-200986	⚠TR 2SD863-V8 F
5-TR5	ET-308141	TR 2SC2603 G
5-TR6,7	ET-338324	TR 2SD1012-V H
5-TR8	ET-348302	TR FET 2SK381 C,D
5-TR9	ET-349705	TR 2SC2320 E,F,G
5-TR10	ET-338324	TR 2SD1012-VH
5-TR11	ET-200986	⚠TR 2SD863-V8 F
5-TR12	ET-338324	⚠TR 2SD1012-V H
5-TR13, 14	ET-308977	TR 2SC2274K F
5-TR15, 16	ET-338324	TR 2SD1012-V H
5-TR20	ET-349705	TR 2SC2320 E,F,G
5-TR21 to 24	ET-354863	TR FET 2SJ40 C,D
5-TR25 to 29	ET-349705	TR 2SC2320 E,F,G
5-TR30, 31	ET-308472	TR 2SA1115 E,F,G
5-TR32 to 36	ET-308141	TR 2SC2603 G
5-TR37	ET-308472	TR 2SA1115 E,F,G
5-TR38, 39	ET-308141	TR 2SC2603 G
5-D1	ED-301911	D SILICON H DS448
5-D2	ED-309341	D GERMA H 1K34A
5-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05
5-D7 to 11	ED-301911	D SILICON H DS448
5-D13	ED-306316	D ZENER H HZ5 C2
5-D14, 15	ED-301911	D SILICON H DS448
5-D16 to 19	ED-344280	D SILICON H GMA-01-FY2 F05
5-RL1	EQ-337067	RELAY LEAD LAB2NS 2NO 18V
5-VR1	EV-345781	R S-FIX H RVF8P01 3P 202
5-VR2	EV-338588	R S-FIX H RVF8P01 3P 503
5-VR3	EV-337993	R S-FIX H RVF8P01 3P 203
5-VR4	EV-344109	R S-FIX H RVF8P01 3P 102
5-VR5	EV-337992	R S-FIX H RVF8P01 3P 502
5-VR6	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
5-VR7	EV-338588	R S-FIX H RVF8P01 3P 503
5-VR8	EV-345781	R S-FIX H RVF8P01 3P 202
5-VL1	EO-337055	COIL VARI 1 FE002S 10MH
5-FL1	EH-351182	FILTER DB 201AK-005 100kHz
5-FL2	EH-351183	FILTER DB 201AK-006 19kHz
5-FL3	EO-337044	COIL TUN 1 102AZ-005
5-FL4	EO-315758	COIL TUN 1 100Z-431 100.00kHz
5-T1	EO-354820	COIL OSC1 32-5030-12 100KC
5-FR1	ER-318248	⚠R FUSE ERD2FC S10 1/4W 47R0G
5-FR2	ER-332225	⚠R FUSE ERD2FC S10 1/4W 56R0G
5-C3	EC-347364	C MC V F05 FE92 8R0D 500DC
5-C12	EC-314990	C STY V S05 CQFS 101J 50DC
5-C60, 61	EC-357103	C PP V F05 CQMFS92 682G 100DC
5-C62	EC-321583	C PP V F10 PFH 102J 630DC
5-C97	EC-307494	C STY V F05 CQ09S 331J 50DC
5-C103	EC-314996	C STY V S05 CQFS 391J 50DC
5-J1	EJ-347664	PIN J YKC21-5053 P 4P
5-J2	EJ-346076	DIN J TCS4690-01-1111 P 8P



2. MECHA CMS01 BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1	ET-311977	PHOTO SENSOR SPI-201
2-2	BM-B314815	⚠MOTOR [PULLEY] PART HX-M5
2-3	TC-344901	HOLDER THRUST
2-4	MI-B344207	ARM IDLER FR PART
2-5	MI-B344215	ARM IDLER TU PART
2-6	ZG-343152	SP PULL TU IDLER
2-7	TC-344219	CAM SHIFTER
2-8	SK-344220	SIIDE [F]
2-9	TC-344221	SLIDE [R]
2-10	ZS-343153	SP PULL SLIDE
2-11	MZ-353272	CAM [F]-[B]
2-12	MZ-353271	CAM [R]-[B]
2-13	TC-344224	ARM LOCK [F]
2-14	TC-344225	ARM LOCK [R]
2-15	TC-344226	ARM JOINT
2-16	ZG-344227	SP TORTION PLUNGER
2-17	ZW-340648	RING CS190STL PKR
2-18	EP-344251	SOLENOID 0730PLT 12V
2-19	ZW-345389	PW26×080×020NYL
2-20	MI-B344228	FLYWHEEL PART
2-21	MB-344230	BELT 4.0×0.5T×D61CRHS60
2-22	MB-344231	BELT 1.0×D33.3CR HS60
2-23	MB-344905	BELT 1.2×D38.2 CR MS60
2-24	MB-353756	PULLEY RUBBER [C]
2-25	ZS-430413	CTS26×04STL CMT
2-26	EP-344251	SOLENOID 0730PLT 12V
2-27	ZG-356022	SP TORTION PLUNGER [B]
2-28	ZS-442585	BID26x04STL CMT
2-29	ZS-592378	PAN26×03STL CMT

NOTE:
Parts listed in 1 to 29 on the exploded view and list are normally stocked for replacement purpose. The remaining parts shown in this manual are not normally stocked, because they are seldom required for routine service.

MECHA CMS01 BLOCK(1)

[B]

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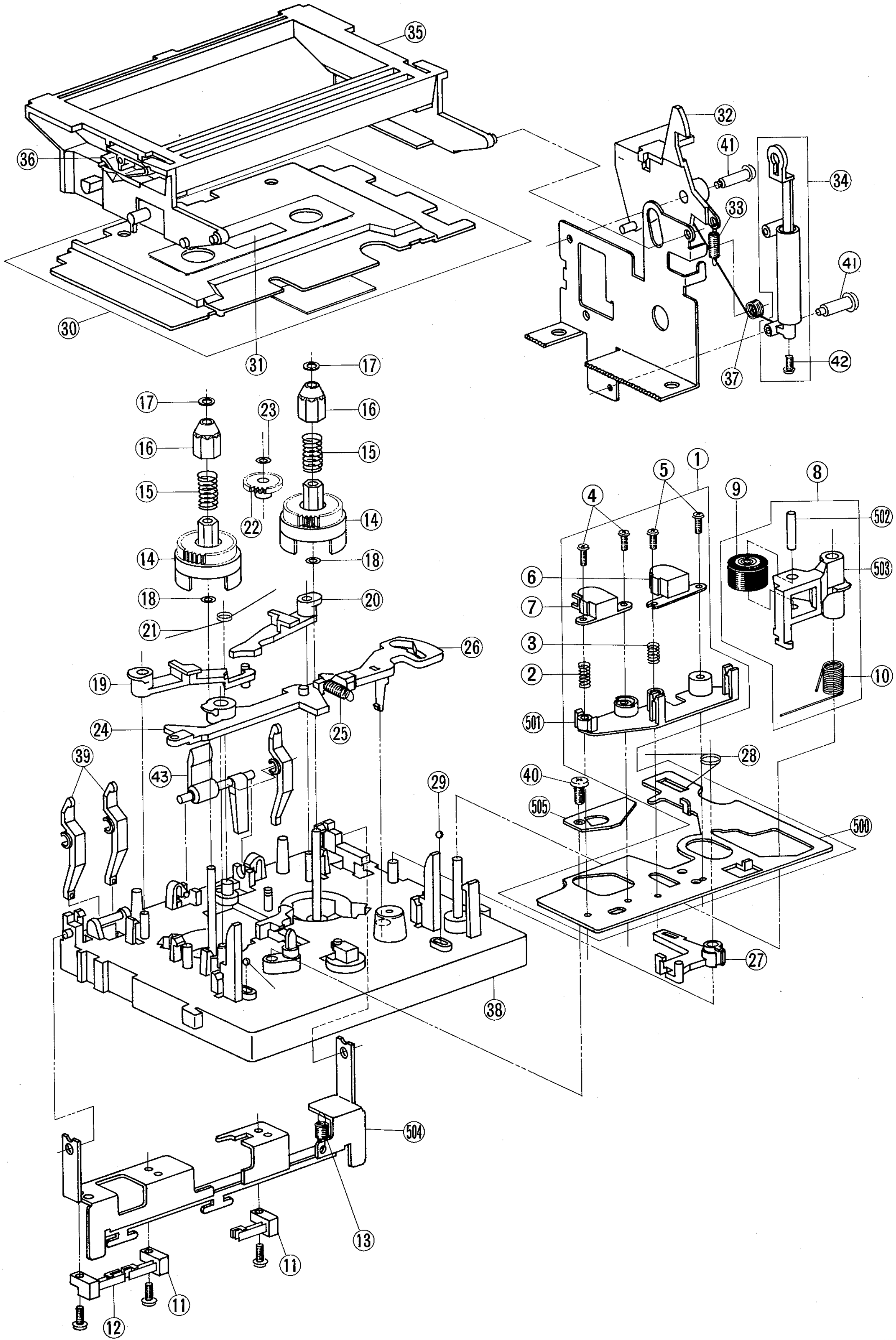

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REF. NO.	PARTS NO.	DESCRIPTION
69	ET-350795	TR 2SC3399
70	ET-338324	TR 2SD1012-V H
71	ET-310148	TR 2SD612K E,F
72	ET-349979	TR 2SD794 P,Q,R
73	ET-200986	TR 2SD863-V8 F
74	EV-344109	R S-FIX H RVF8P01 3P 102
75	EV-345781	R S-FIX H RVF8P01 3P 202
76	EV-337993	R S-FIX H RVF8P01 3P 203
77	EV-337992	R S-FIX H RVF8P01 3P 502
78	EV-338588	R S-FIX H RVF8P01 3P 503
79	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
80	EV-354807	VR SLIDE VJ6014DPVN A503×2
81	HE-337047	HEAD E HJ213270 C
82	HP-H2210A010A	HEAD PR4-7TG PR6-7TG
83	MB-344231	BELT 1.0×D33.3CR HS60
84	MB-344905	BELT 1.2×D38.2 CR HS60
85	MB-344230	BELT 4.0×0.5T×D61CRHS60
86	MB-353756	PULLEY RUBBER [C]
87	MI-B344207	ARM IDLER FR PART
88	MI-B344215	ARM IDLER FR PART
89	MP-336153	PINCH ROLLER [A]
90	MZ-353272	CAM [F]-[B]
91	MZ-344906	GEAR FF [B]
92	TC-344219	CAM SHIFTER

"NOTE" N : New Parts

SYMBOL FOR DESTINATION

A : AAL [U.S.A]
B : UK [Engalnd]
C : CSA [Canada]
E : CEE [Europe]
S : SAA [Australia]
U : U/T [Universal Area]

[U]

6. SYSCON (A) PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
6-IC1	EI-345765	IC LB1292
6-IC2	EI-343417	IC LB1294
6-IC3	EI-337009	IC LC4049B
6-IC4	EI-337845	IC BA6146 M
6-D3 to 7	ED-301911	D SILICON H DS448
6-SW1 to 9	ES-355604	SW TACT B3F-1020
6-SW10	ES-349597	SW SLIDE 00130329 BLACK 01-3 S
6-SW11	ES-354808	SW PUSH SK1100-Y-QM 02-02N
6-SW12A	ES-354809	SW PUSH SK1005-031Q 3 THROW [A5]
6-SW12B	ES-354810	SW PUSH SK1005-051Q 5 THROW [A5X]
6-IB1	EH-354812	COMP R RGSD4X473K
6-IN1	EM-354811	IND FL FIP48BW16Y

7. SYSCON (B) PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
7-IC1	EI-300042	IC M54519P
7-IC2	EI-337009	IC LC4049B
7-IC3	EI-345765	IC LB1292
7-IC4	EI-344277	IC LM6405H-145
7-TR1	ET-348931	TR 2SB774 R,S,T
7-TR2	ET-308472	TR 2SA1115 E,F,G
7-TR3	ET-350795	TR 2SC3399
7-TR4	ET-348931	TR 2SB774 R,S,T
7-TR5,6	ET-350795	TR 2SC3399
7-TR7	ET-308141	⚠TR 2SC6603 G
7-D1 to 21	ED-301911	D SILICON H DS448
7-X1	EI-337017	OSC CE CSB800A 0.800000MHz
7-IB1	EH-354813	COMP R RGSD08x223K

8. REC VR PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
8-VR1	EV-354807	VR SLIDE VJ6014DPVN A503x2

9. JACK PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
9-J1	EJ-357732	PHONE J HLJ0527-3030
9-J2	EJ-355012	PHONE J 3P HLJ0541-010 6.3

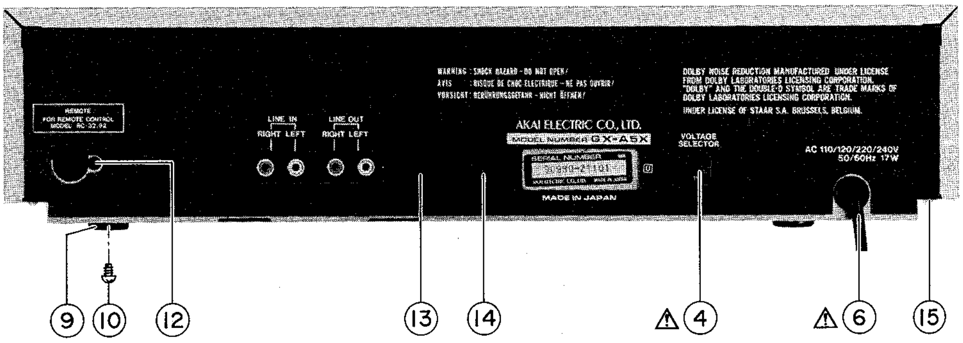
10. POWER SUPPLY PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
10-TR1	ET-349081	⚠TR 2SC3383 S,T
10-TR2	ET-308472	TR 2SA1115 E,F,G
10-TR3	ET-310148	⚠TR 2SD612K E,F
10-TR4	ET-349081	⚠TR 2SC3383 S,T
10-TR5	ET-310148	⚠TR 2SD612K E,F
10-TR6	ET-349081	⚠TR 2SC3383 S,T
10-TR7	ET-349979	⚠TR 2SD794 P,Q,R
10-TR8	ET-349081	⚠TR 2SC3383 S,T
10-TR9	ET-349081	TR 2SC3383 S,T
10-D1	ED-331667	D ZENER H HZ7 A1
10-D2	ED-301911	D SILICON H DS448
10-D3	ED-330319	⚠D SILICON DBA10B 100/1.0A
10-D4	ED-336805	⚠D SILICON DS135D-KB1 200/1.0A
10-D5	ED-331667	D ZENER H HZ7 A1
10-D6	ED-330319	⚠D SILICON DBA10B 100/1.0A
10-D7	ED-332336	D ZENER H HZ20 3
10-D8	ED-336805	⚠D SILICON DS135D-KB1 200/1.0A
10-D9	ED-346622	D ZENER H HZ30 1
10-D10	ED-301911	D SILICON H DS448
10-SW1	ES-344270	⚠ SW PUSH SDLD1P 01-1
10-R11	ER-354870	R OMF H S15 FS 1W 132J
10-C1	EC-201645	C EC V CUT SM 222M 6.3DC
10-C5	EC-316186	C EC V CUT SM 222M 16.0DC
10-C8	EC-323847	C EC V CUT SM 102M 35.0DC
10-C14A	EC-320548	⚠C CE V F 103Z 250AC [U,C,A]
10-C14B	EC-338411	⚠C CE V FZ 103P 400AC [E,B,S]
10-1	EZ-200473	SILICON RUBBER SHEET TC-30

11. CONNECTOR PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
11-D1,2	ED-306109	D SILICON W03B 100/1.0A
11-D3,4	ED-301911	D SILICON H DS448

ASSEMBLY BLOCK


REMOTE
FOR REMOTE CONTROL
MODEL RC-32,92
LINE IN
RIGHT LEFT
LINE OUT
RIGHT LEFT
WARNING : SHOCK HAZARD - DO NOT OPEN!
AVIS : RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR!
VORSICHT : BERÜHRUNGSGEFAHR - NICHT ÖFFNEN!
AKAI ELECTRIC CO., LTD.
MODEL NUMBER GX-A5X
SERIAL NUMBER
MADE IN JAPAN
DOLBY NOISE REDUCTION MANUFACTURED UNDER LICENSE FROM DOLBY LABORATORIES LICENSING CORPORATION.
"DOLBY" AND THE DOUBLE-D SYMBOL ARE TRADE MARKS OF DOLBY LABORATORIES LICENSING CORPORATION.
UNDER LICENSE OF STAAR S.A. BRUSSELS, BELGIUM.
VOLTAGE SELECTOR
AC 110/120/220/240V
50/60Hz 17W
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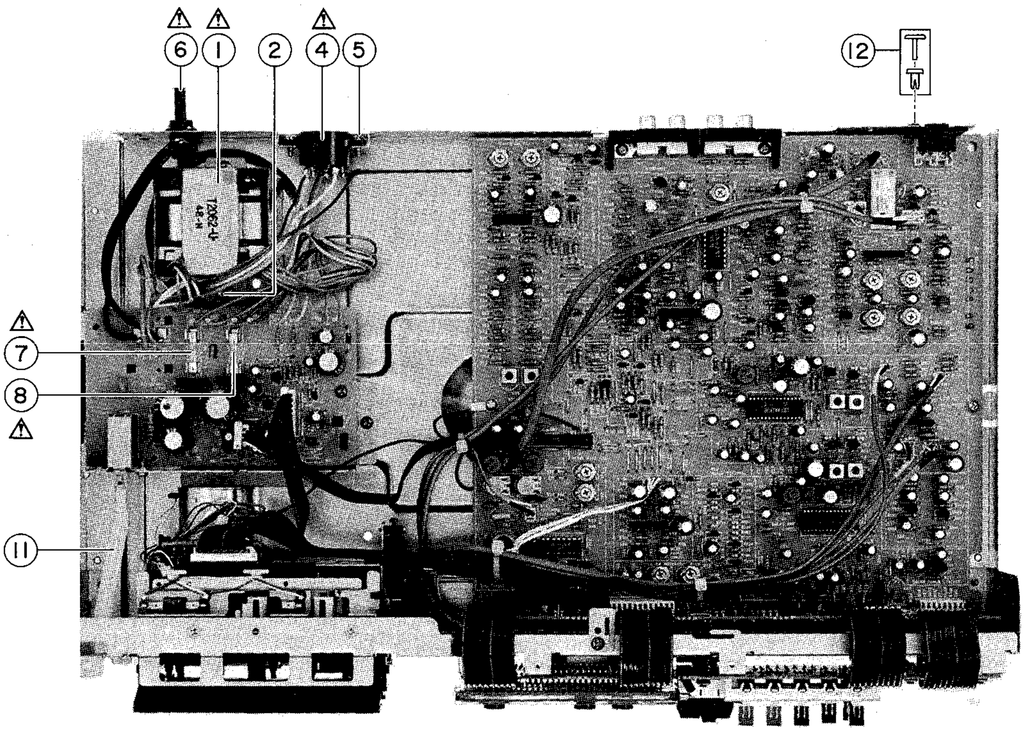
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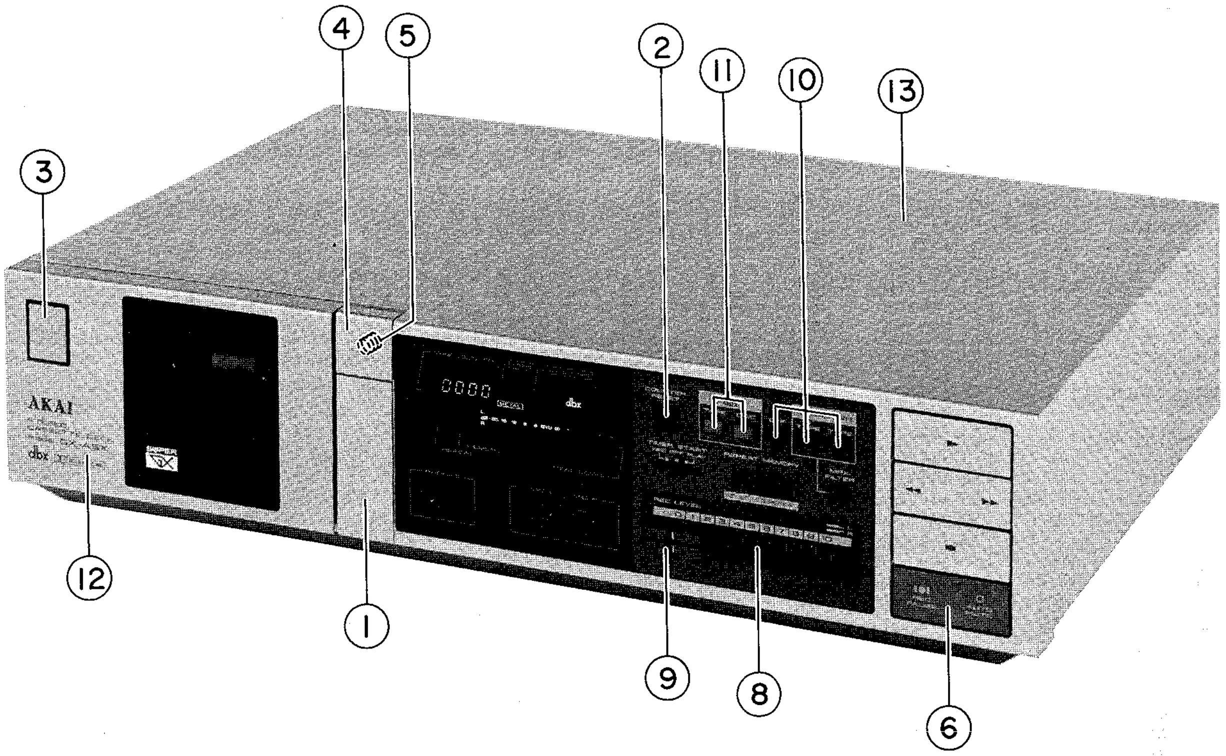
T2062-U

12. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
12-1A	BT-354781	⚠TRANS POWER T2062-U [T901][U]
12-1B	BT-354782	⚠TRANS POWER T2062-AC [T901][C,A]
12-1C	BT-354783	⚠TRANS POWER T2062-EV [T901] [E]
12-1D	BT-354784	⚠TRANS POWER T2062-BS [T901][B,S]
12-2	ZS-301398	ST BID40×08STL CMT
12-3	ZW-413188	N40STL CMT 1
12-4	ES-305733	⚠ SW SELECTOR HXW0131-260 01-4 [SW901][U]
12-5	ZS-348375	ST BR30×08STL CMT [U]
12-6A	EW-347683	⚠ AC CORD 2 CORES VM0129, VFF-CB U/T [U]
12-6B	EW-347607	⚠ AC CORD 2 CORES VM0238, SPT-1CB UC [C,A]
12-6C	EW-347682	⚠ AC CORD 2 CORES VM0364, FC3097-CB EV [E]
12-6D	EW-347680	⚠ AC CORD 2 CORES LCFL2×0.75-CB B [B]
12-6E	EW-347681	⚠ AC CORD 2 CORES VM0436, FC3093-CB S [S]
12-7A	EF-306124	⚠FUSE TSC A 250V 0.63A [F1][U]
12-7B	EF-305703	⚠ FUSE TSC 125V 0.63A [F1] [C,A]
12-7C	EF-593706	⚠ FUSE SEMKO T 250V 0.50A [F1] [E,B,S]
12-8A	EF-309388	⚠ FUSE TSC A 250V 0.80A [F2][U]
12-8B	EF-309391	⚠ FUSE TSC 125V 0.80A [F2] [C,A]
12-8C	EF-601942	⚠ FUSE SEMKO T 250V 0.63A [F2] [E,B,S]
12-9	SA-349332	FOOT
12-10	ZS-354869	ST BR30×06STL CMT C080
12-11	MZ-349534	JOINT POWER
12-12	ZW-698308	RV NYL30×055 BL
12-13A	SP-354785A	PANEL REAR BOARD GX-A5 [U]
12-13B	SP-354785F	PANEL REAR BOARD GX-A5X [U]
12-13C	SP-354785B	PANEL REAR BOARD GX-A5 [A,C]
12-13D	SP-354785G	PANEL REAR BOARD GX-A5X [A,C]
12-13E	SP-354785C	PANEL REAR BOARD GX-A5 [E,V]
12-13F	SP-354785H	PANEL REAR BOARD GX-A5X [E,V]
12-13G	SP-354785D	PANEL REAR BOARD GX-A5 [B]
12-13H	SP-354785J	PANEL REAR BOARD GX-A5X [B]
12-13I	SP-354785E	PANEL REAR BOARD GX-A5 [S]
12-13J	SP-354785K	PANEL REAR BOARD GX-A5X [S]
12-14	ZS-352120	T2BR30×08STL BCM C080
12-15	ZS-343159	T2BR30×60STL NI3

FINAL ASSEMBY BLOCK



13. FINAL ASSEMBLY BLOCK

PANEL FRONT BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
13-1A	BD-T2062A050A	PANEL FRONT BLK GX-A5
13-1AP	BD-T2062A050B	PANEL FRONT BLK GX-A5-P
13-1AB	BD-T2062A050C	PANEL FRONT BLK GX-A5-B
13-1B	BD-T2062A050D	PANEL FRONT BLK GX-A5X
13-1BP	BD-T2062A050E	PANEL FRONT BLK GX-A5X-P
13-1BB	BD-T2062A050F	PANEL FRONT BLK GX-A5X-B
13-2	SK-354634B	KNOB TACT-B
13-3	SK-343017G	KNOB POWER
13-3P	SK-343017B	KNOB POWER-P
13-3B	SK-343017F	KNOB POWER-B
13-4	SK-349513A	KNOB EJECT
13-4P	SK-349513B	KNOB EJECT-P
13-4B	SK-349513C	KNOB EJECT-B
13-5	ZG-313182	SP C-04.5/0.35-25.0 C-029
13-6	SK-349516G	KNOB OPERATE [D] [EXCEPT BL]
13-6B	SK-349516L	KNOB OPERATE [D]-B [BL]

FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
13-7	ZS-320906	ST BR30×06STL CMT [PANEL SET SCREW]
13-8	TC-354636	HOLDER SCALE
13-9	SK-B346104X3	KNOB REC-2 PART [EXCEPT BL]
13-9B	SK-B346104X4	KNOB REC-2-B PART [BL]
13-10	SK-354635C	KNOB PUSH-B
13-11	SK-354635B	KNOB PUSH [X] [A5X]
13-12A	BD-B349521H	LID PANEL [4] PART [A5]
13-12AP	BD-B349521J	LID PANEL [4]-P PART [A5]
13-12AB	BD-B349521P	LID PANEL [4]-B PART [A5]
13-12B	SP-B349521K	LID PANEL [5] PART [A5X]
13-12BP	BD-B349521L	LID PANEL [5]-P PART [A5X]
13-12BB	BD-B349521Q	LID PANEL [5]-B PART [A5X]
13-13	SP-344591A	COVER UPPER
13-13P	SP-344591B	COVER UPPER P
13-13B	SP-344591D	COVER UPPER-B-[2]

SYMBOL FOR COLOR VARIATION
NON : STANDARD COLOR
P : PEARL SHADOW
B or BL : BLACK

NOTE: PANEL FRONT BLK including 13–2, 13–3, 13–4, 13–5, and 13–6.

INDEX

PARTS NO.	REF. NO.
BA-T2062A030A	3-1A
BA-T2062A030B	3-1B
BA-T2062A040A	3-2A
BA-T2062A040B	3-2B
BA-T2062A040C	3-2C
BA-T2062A040D	3-2D
BB-T2051A020E	1-X
BD-B344206	1-30
BD-B349521H	13-12A
BD-B349521J	13-12AP
BD-B349521L	13-12BP
BD-B349521P	13-12AB
BD-B349521Q	13-12BB
BD-T2062A050A	13-1A
BD-T2062A050B	13-1AP
BD-T2062A050C	13-1AB
BD-T2062A050D	13-1B
BD-T2062A050E	13-1BP
BD-T2062A050F	13-1BB
BH-T2051A030 D	1-1
BL-T2051A040A	1-8
BM-B314815	2-2
BT-354781	12-1A
BT-354782	12-1B
BT-354783	12-1C
BT-354784	12-1D
EC-201645	10-C1
EC-307494	5-C97
EC-314990	4-C12
EC-314990	5-C12
EC-314996	5-C103
EC-316186	10-C5
EC-320548	10-C14A
EC-321583	4-C62
EC-321583	5-C62
EC-323847	10-C8
EC-338411	10-C14B
EC-347364	4-C3
EC-347364	5-C3
EC-357103	4-C60
EC-357103	4-C61
EC-357103	5-C60
EC-357103	5-C61
ED-301911	4-D1
ED-301911	5-D1
ED-301911	5-D7 to 10
ED-301911	5-D14
ED-301911	5-D15
ED-301911	6-D3to7
ED-301911	7-D1 to 21
ED-301911	10-D10
ED-301911	10-D2
ED-301911	11-D4
ED-301911	11-D3
ED-306109	11-D1
ED-306109	11-D2
ED-306316	5-D13
ED-309341	4-D2
ED-309341	5-D2
ED-330319	10-D3
ED-330319	10-D6
ED-331667	10-D1
ED-331667	10-D5
ED-332336	10-D7
ED-338805	10D4
ED-336805	10-D8
ED-344244	1-31
ED-344280	4-D3
ED-344280	4-D4
ED-344280	5-D3
ED-344280	5-D4
ED-344280	5-D16 to 19
ED-346622	10-D9
EF-305703	12-7B
EF-306124	12-7A
EF-309388	12-8A
EF-309391	12-8B
EF-593706	12-7C
EF-601942	12-8C
EH-351182	4-FL1
EH-351182	5-FL1
EH-351183	4-FL2
EH-351183	5-FL2
EH-354812	6-IB1
EH-354813	7-IB1
EI-300042	7-IC1
EI-337009	6-IC3
EI-337009	7-IC2
EI-337017	7-X1
EI-337228	4-IC1
EI-337228	4-IC4
EI-337228	4-IC6
EI-337228	5-IC1
EI-337228	5-IC4
EI-337228	5-IC6
EI-337228	5-IC8
EI-337845	6-IC4
EI-343417	6-IC2
EI-344277	7-IC4
EI-345765	6-IC1
EI-345765	7-IC3
EI-349388	4-IC5
EI-349388	5-IC5
EI-349590	4-IC3
EI-349590	5-IC3
EI-354821	4-IC2
EI-354821	5-IC2
EI-354822	5-IC7
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EJ-346076	5-J2
EJ-347664	4-J1
EJ-347664	5-J1
EJ-355012	9-J2
EJ-357732	9-J1
EM-354811	6-IN1
EO-315758	4-FL4
EO-315758	5-FL4
EO-337044	4-FL3
EO-377044	5-FL3
EO-337055	4-VL1
EO-337055	5-VL1
EO-354820	4-T1
EO-354820	5-T1
EP-344251	2-18
EP-344251	2-26
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EQ-337067	5-RL1
ER-318248	4-FR1
ER-318248	5-FR1
ER-332225	5-FR2
ER-354870	10-R11
ES-305733	12-4
ES-344253	1-11
ES-344257	1-12
ES-344270	10-SW1
ES-349597	6-SW10
ES-354808	6-SW11
ES-354809	6-SW12A
ES-354810	6-SW12B
ES-355604	6-SW1 to 9
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ET-200986	4-TR11
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ET-200986	5-TR11
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ET-338324	4-TR7
ET-338324	4-TR10
ET-338324	4-TR12
ET-338324	4-TR15
ET-338324	4-TR16
ET-338324	5-TR7
ET-338324	5-TR10
ET-338324	5-TR6
ET-338324	5-TR12
ET-338324	5-TR15
ET-338324	5-TR16
ET-348302	4-TR8
ET-348302	5-TR8
ET-348931	7-TR1
ET-348931	7-TR4
ET-349081	10-TR1
ET-349081	10-TR4
ET-349081	10-TR6
ET-349081	10-TR8
ET-349081	10-TR9
ET-349705	4-TR1
ET-349705	4-TR2
ET-349705	4-TR9
ET-349705	5-TR1
ET-349705	5-TR2
ET-349705	5-TR9
ET-349705	5-TR20
ET-349705	5-TR25 to 29
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ET-350795	7-TR6
ET-354863	5-TR21 to 24
EV-336785	4-VR6
EV-336785	5-VR6
EV-337992	4-VR5
EV-337992	5-VR5
EV-337993	4-VR3
EV-337993	5-VR3
EV-338588	4-VR2
EV-338588	4-VR7
EV-338588	5-VR2
EV-338588	5-VR7
EV-344109	4-VR4
EV-344109	5-VR4
EV-345781	4-VR1
EV-345781	5-VR1
EV-345781	5-VR8
EV-354807	8-VR1
EW-347607	12-6B
EW-347680	12-6D
EW-347681	12-6E
EW-347682	12-6C
EW-347683	12-6A
EZ-200473	10-1
HE-337047	1-7
HP-H2210A010A	1-6
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MB-353756	2-24
MI-B344207	2-4
MI-B344215	2-5
MI-B344228	2-20
ML-344191	1-19
ML-344192	1-20
ML-344189	1-24
ML-344197	1-26
ML-344286	1-39
MP-336153	1-9
MT-344187	1-14
MT-349681	1-16
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MZ-344906	1-22
MZ-349534	12-11
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SA-349332	12-9
SE-344239	1-35
SK-B346104X3	13-9
SK-B346104X4	13-9B
SK-343017B	13-3P
SK-343017F	13-3B
SK-343017G	13-3
SK-344220	2-8
SK-349513A	13-4
SK-349513B	13-4P
SK-349513C	13-13B
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SK-354634B	13-2
SK-354635B	13-11
SK-354635C	13-10
SP-B349521K	13-12B
SP-344591A	13-13
SP-344591B	13-13P
SP-344591D	13-13B
SP-354785A	12-13A
SP-354785B	12-13C
SP-354785C	12-13E
SP-354785D	12-13G
SP-354785E	12-13I
SP-354785F	12-13B
SP-354785G	12-13D
SP-354785H	12-13F
SP-354785J	12-13H
SP-354785K	12-13J
TC-344198	1-27
TC-344219	2-7
TC-344221	2-9
TC-344224	2-13
TC-344225	2-14
TC-344226	2-15
TC-344336	1-32
TC-344901	2-3
TC-354636	13-8
ZG-312925	1-33
ZG-312995	1-13
ZG-313182	13-5
ZG-336615	1-36
ZG-343104	1-2
ZG-343152	2-6
ZG-344188	1-15
ZG-344194	1-21
ZG-344199	1-28
ZG-344200	1-25
ZG-344205	1-10
ZG-344227	2-16
ZG-344240	1-37
ZG-344900	1-3
ZG-356022	2-27
ZS-301398	12-2
ZS-320906	13-7
ZS-332008	1-40
ZS-332008	1-42
ZS-343153	2-10
ZS-343159	12-15
ZS-344238	1-41
ZS-348375	12-5
ZS-352120	12-14
ZS-354869	12-10
ZS-417328	1-4
ZS-430413	2-25
ZS-442585	2-28
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ZS-592378	2-29
ZW-305546	1-18
ZW-340648	2-17
ZW-343120	1-23
ZW-345389	2-19
ZW-364342	1-17
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ZW-698308	12-12

AKAI

MODEL GX-A5/X

SCHEMATIC DIAGRAM AND PC BOARD

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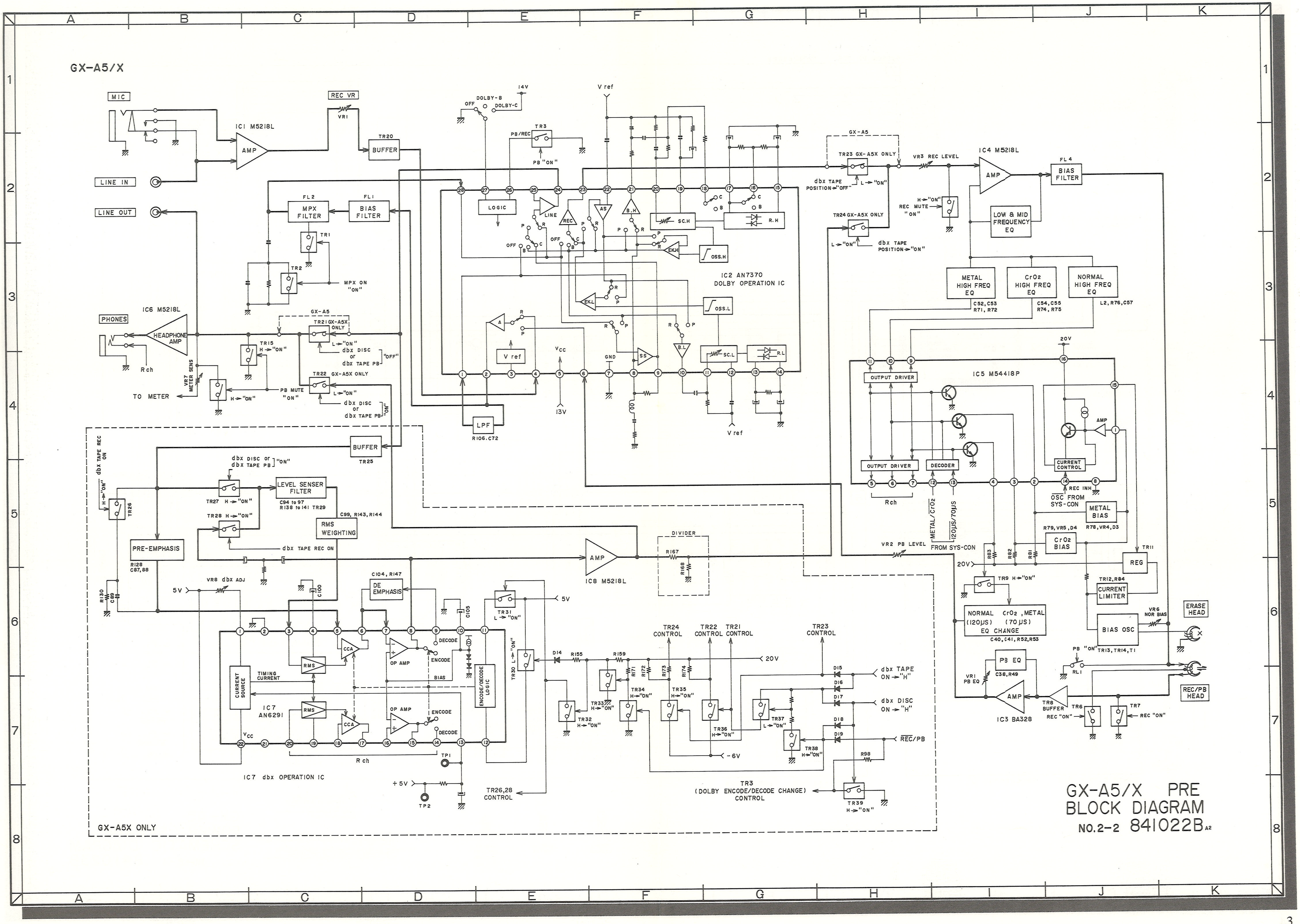
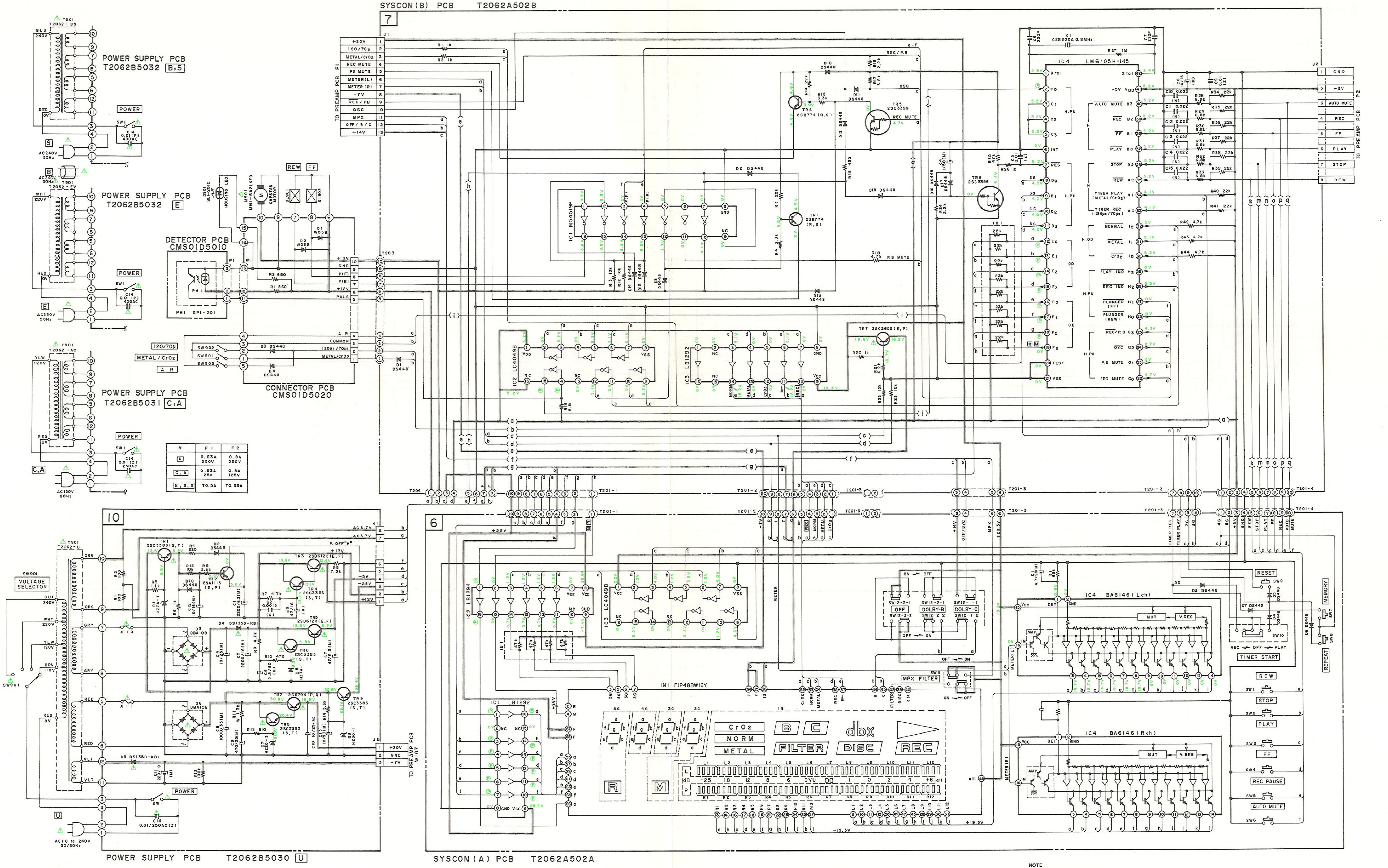
LM 6504-145

Pin No.	Symbol	Meaning	
1	XTAL	Crystal oscillator input	
2	C0	Tape Pulse Input	
3	C1	×	
4	C2	×	
5	C3	×	
6	$\overline{\text{INT}}$	Interrupting terminal:	To "GND"
7	$\overline{\text{RES}}$	Reset terminal:	Reset at "L", when power ON.
8	D0	DIGIT DRIVE (4-digit)	
9	D1		
10	D2		
11	D3		
12	E0	7 Segments FLD DRIVE a	Light when synchronized with D0 to D3
13	E1	b	
14	E2	c	
15	E3	d	
16	F0	e	
17	F1	f	
18	F2	g	
19	F3	Strobe signal for operation indicator FLD DRIVE	
20	TEST	To "GND"	
21	Vss		
22	G0	REC MUTE terminal:	REC MUTE at "H"
23	G1	PB MUTE terminal:	REC MUTE at "H"
24	G2	BIAS OSC control terminal:	Oscillator driven at "L"
25	G3	REC/PB switching terminal:	PB at "H" and REC at "L"
26	H0	PLUNGER (R)	
27	H1	PLUNGER (F)	
28	H2	REC FLD indicator terminal:	FLD lights at "L"
29	H3	PB FLD indicator terminal:	FLD lighrs at "L"
30	I0	TAPE SELECTOR switching terminal	
31	I1		
32	I2		
33	A0	MEMORY, TIMER REC, 120μ/70μ, REC DETECTION (A.R)	Input terminal
34	A1	REPEAT, TIMER PLAY, METAL/CrO₂, COUNTER RESET Input terminal	
35	A2	Key input REW	Earthed when the operation key is pressed.
36	A3	STOP	
37	B0	PLAY	
38	B1	FF	
39	B2	REC	
40	B3	AUTO MUTE	
41	VDD	+5V	
42	EXTAL	Crystal oscillator output	


GX-A5/X
MIC
LINE IN
LINE OUT
PHONES
REC VR
VR1
IC1 M5218L
AMP
TR20
BUFFER
FL2
MPX FILTER
FL1
BIAS FILTER
TR1
TR2
MPX ON "ON"
IC6 M5218L
HEADPHONE AMP
Rch
TO METER
VR7 METER SENS
TR15 H→"ON"
GX-A5
TR21 GX-A5X ONLY
L→"ON"
dbx DISC or dbx TAPE PB "OFF"
TR22 GX-A5X ONLY
PB MUTE "ON"
H→"ON"
dbx DISC or dbx TAPE PB "ON"
14V
DOLBY-B
OFF
DOLBY-C
TR3
PB/REC
PB "ON"
LOGIC
LINE
REC
AS
B.H
SC.H
R.H
EKH
OSS.H
EK.L
OSS.L
IC2 AN7370
DOLBY OPERATION IC
V ref
Vcc
GND
SS
B.L
SC.L
R.L
13V
LPF
R106.C72
BUFFER
TR25
dbx TAPE REC ON
H→"ON"
TR26
dbx DISC or dbx TAPE PB "ON"
TR27 H→"ON"
LEVEL SENSER FILTER
C94 to 97
R138 to 141 TR29
TR28 H→"ON"
RMS WEIGHTING
C99, R143, R144
PRE-EMPHASIS
R128
C87, 88
dbx TAPE REC ON
AMP
IC8 M5218L
DIVIDER
R167
R168
R130
C89
5V
VR8 dbx ADJ
C100
C104, R147
DE EMPHASIS
C105
TR31 L→"ON"
5V
CURRENT SOURCE
TIMING CURRENT
RMS
CCA
OP AMP
DECODE
ENCODE
BIAS
ENCODE/DECODE LOGIC
IC7 AN6291
Vcc
Rch
IC7 dbx OPERATION IC
TP1
+5V
TP2
TR26,28 CONTROL
TR30 L→"ON"
D14
R155
R159
20V
R171
R172
R173
R174
TR32 H→"ON"
TR33 H→"ON"
TR34 H→"ON"
TR35 H→"ON"
TR36 H→"ON"
TR37 L→"ON"
TR38 H→"ON"
TR24 CONTROL
TR22 CONTROL
TR21 CONTROL
TR23 CONTROL
-6V
D15
D16
D17
D18
D19
dbx TAPE ON→"H"
dbx DISC ON→"H"
REC/PB
R98
TR3 (DOLBY ENCODE/DECODE CHANGE) CONTROL
TR39 H→"ON"
GX-A5X ONLY
GX-A5
TR23 GX-A5X ONLY
dbx TAPE POSITION→"OFF"
L→"ON"
TR24 GX-A5X ONLY
L→"ON"
dbx TAPE POSITION→"ON"
VR3 REC LEVEL
REC MUTE "ON"
H→"ON"
IC4 M5218L
AMP
FL4
BIAS FILTER
LOW & MID FREQUENCY EQ
METAL HIGH FREQ EQ
C52, C53
R71, R72
CrO2 HIGH FREQ EQ
C54, C55
R74, R75
NORMAL HIGH FREQ EQ
L2, R76, C57
20V
IC5 M54418P
OUTPUT DRIVER
AMP
OUTPUT DRIVER
DECODER
CURRENT CONTROL
Rch
REC INH
OSC FROM SYS-CON
METAL/CrO2
120µS/70µS
FROM SYS-CON
METAL BIAS
R79, VR5, D4
R78, VR4, D3
CrO2 BIAS
VR2 PB LEVEL
20V
R83
R82
R81
TR11
REG
TR9 H→"ON"
TR12, R84
CURRENT LIMITER
NORMAL (120µS) CrO2, METAL (70µS) EQ CHANGE
C40, C41, R52, R53
BIAS OSC
VR6 NOR BIAS
ERASE HEAD
PB "ON" TR13, TR14, T1
PB EQ
C38, R49
RL1
VR1 PB EQ
AMP
IC3 BA328
TR8 BUFFER
TR6
REC "ON"
TR7
REC "ON"
REC/PB HEAD
A B C D E F G H I J K
1 2 3 4 5 6 7 8

GX-A5/X PRE BLOCK DIAGRAM

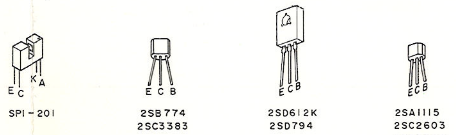
NO.2-2 841022B A2


SYSCON (B) PCB T2062A502B
7
POWER SUPPLY PCB T2062B5032 B,S
POWER SUPPLY PCB T2062B5032 E
POWER SUPPLY PCB T2062B5031 C,A
POWER SUPPLY PCB T2062B5030 U
DETECTOR PCB CMS01D5010
CONNECTOR PCB CMS01D5020
SYSCON (A) PCB T2062A502A
10
6
POWER
SW1
T901
AC240V 50Hz
AC220V 50Hz
AC120V 60Hz
AC110 ~ 240V 50/60Hz
SW901 VOLTAGE SELECTOR
TO PREAMP PCB P1
TO PREAMP PCB P2
TO PRE AMP PCB W107
IC1 M54519P
IC2 LC4049B
IC3 LB1292
IC4 LM6405H-145
IC4 BA6146 (Lch)
IC4 BA6146 (Rch)
IN1 FIP48BW16Y
CAPSTAN MOTOR
REW FF
RESET
MEMORY
REPEAT
TIMER START
AUTO MUTE
REC PAUSE
PLAY
STOP
MPX FILTER
DOLBY-B
DOLBY-C
OFF
CrO2
NORM
METAL
FILTER
DISC
dbx
REC

*	F1	F2
U	0.63A 250V	0.8A 250V
C,A	0.63A 125V	0.8A 125V
E,B,S	T0.5A	T0.63A

B (POWER SUPPLY) LINE

VOLTAGES ARE INDICATED AT PLAY MODE. (315Hz 0VU)


E C K A
E C B
E C B
E C B

SPI-201

2SB774
2SC3383

2SD612K
2SD794

2SA1115
2SC2603
2SC3399

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

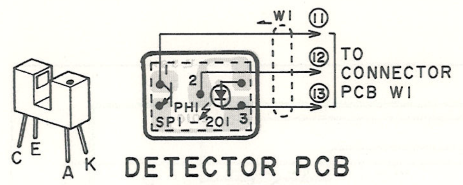
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

GX-A5
POWER / SYSCON SCHEMATIC DIAGRAM

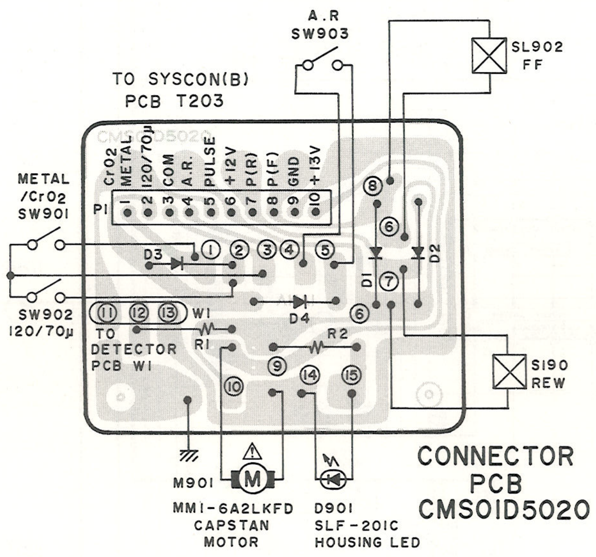
NO. 2-1 841023B 3

001603


W1
⑪
⑫
⑬
TO CONNECTOR PCB W1
PH1
SP1-201
C E A K

SPI-201

DETECTOR PCB CMS01D5010


A.R SW903
SL902 FF
TO SYSCON(B) PCB T203
METAL /CrO2 SW901
SW902 120/70μ
P1
CrO2 METAL 120/70μ COM A.R. PULSE +12V P(R) P(F) GND +13V
D1 D2 D3 D4
W1 R1 R2
TO DETECTOR PCB W1
S190 REW
M901 MM1-6A2LKFD CAPSTAN MOTOR
D901 SLF-201C HOUSING LED

CONNECTOR PCB CMS01D5020

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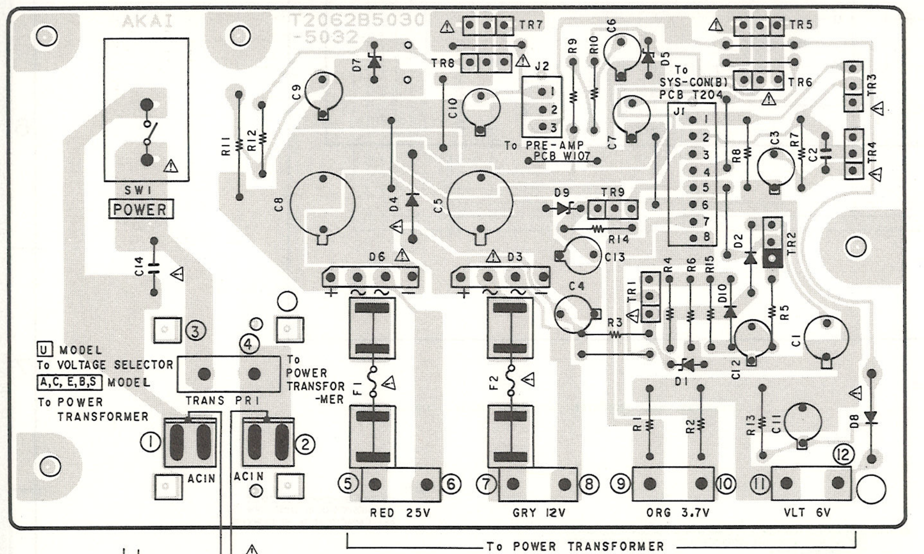
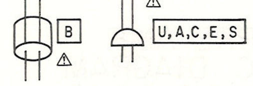
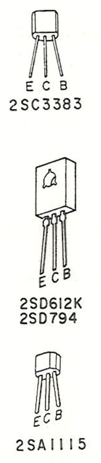
B ■●● =PNP TRANSISTOR

B ●●● =NPN TRANSISTOR

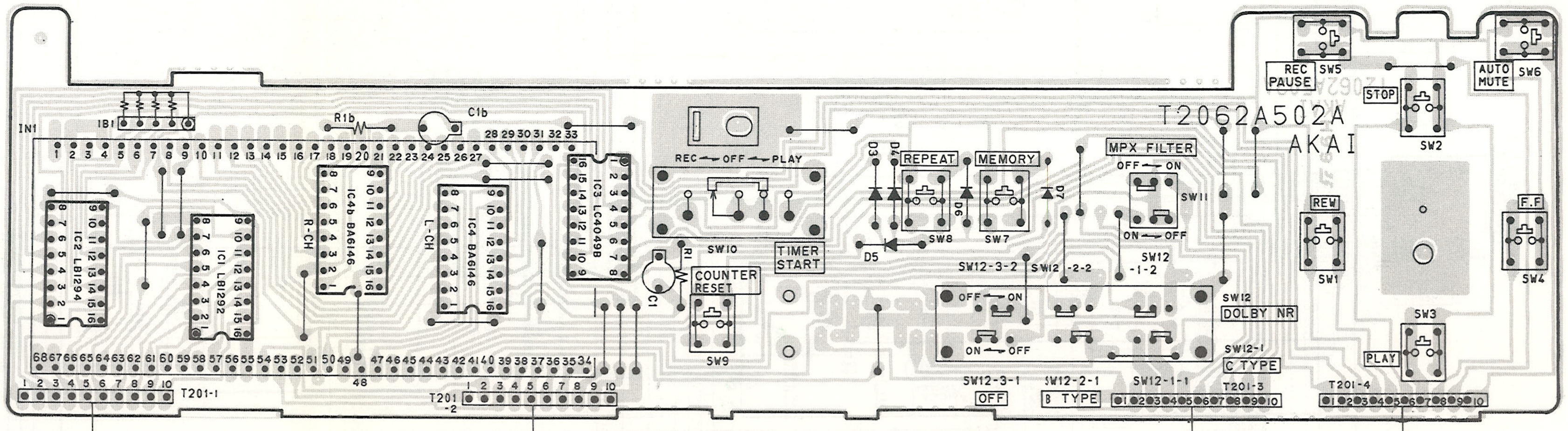

AKAI
T2062B5030 -5032
SW1 POWER
TR1 TR2 TR3 TR4 TR5 TR6 TR7 TR8 TR9
J1 J2
To SYS-CON(B) PCB T204
To PRE-AMP PCB W107
U MODEL To VOLTAGE SELECTOR
A,C,E,B,S MODEL To POWER TRANSFORMER
To POWER TRANSFORMER
TRANS PRI
ACIN ACIN
RED 25V
GRY 12V
ORG 3.7V
VLT 6V
To POWER TRANSFORMER



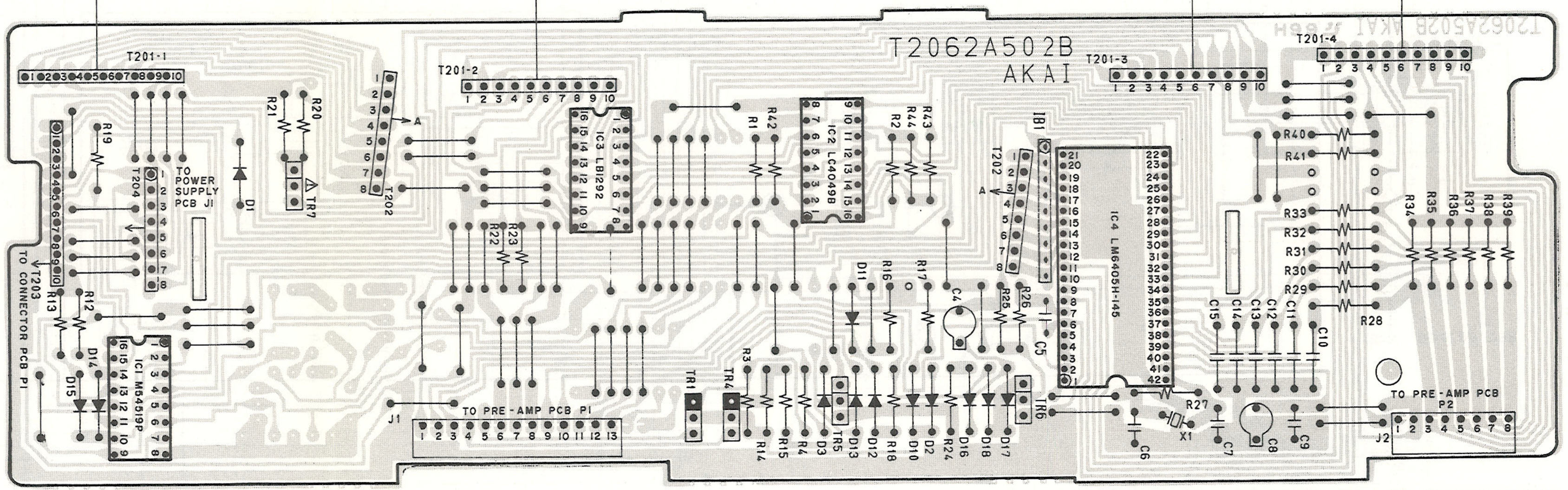

E C B
2SC3383
E C B
2SD612K
2SD794
E C B
2SA1115

POWER SUPPLY PCB T2062B5030 U
5031 C, A
5032 E, B, S

TR1------2SC3383(S,T)
TR2------2SA1115(E,F)
TR3,5----2SD612K(E,F)
TR4,6----2SC3383(S,T)
TR7------2SD794(P, Q)
TR8,9----2SC3383(S,T)


T2062A502A
AKAI
IN1 IB1
R1b C1b
IC2 LB1294
IC1 LB1292
IC4b BA6146
IC4 BA6146
IC3 LC4049B
R-CH L-CH
REC — OFF — PLAY
SW10
COUNTER RESET
SW9
TIMER START
REPEAT MEMORY
SW8 SW7
MPX FILTER OFF — ON
SW11
SW12-3-2 SW12-2-2 SW12-1-2
SW12 DOLBY NR
SW12-1 C TYPE
SW12-3-1 OFF
SW12-2-1 B TYPE
SW12-1-1
REC PAUSE SW5
STOP SW2
AUTO MUTE SW6
REW SW1
F.F SW4
SW3 PLAY
T201-1 T201-2 T201-3 T201-4

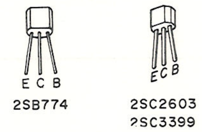
SYSTEM CONTROL(A) PCB T2062A502A

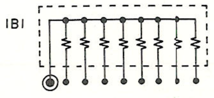

T2062A502B
AKAI
T201-1 T201-2 T201-3 T201-4
T204
TO POWER SUPPLY PCB J1
TO CONNECTOR PCB P1
T203
T202
IC1 M54519P
IC3 LB1292
IC2 LC4049B
IC4 LM6405H-145
IB1
X1
J1 TO PRE-AMP PCB P1
J2 TO PRE-AMP PCB P2

TR1,4 ······ 2SB774(R,S)
TR5,6 ······ 2SC3399
TR7 ········ 2SC2603(E,F)

B ●●● = NPN

B ■●● = PNP


E C B
2SB774
E C B
2SC2603
2SC3399

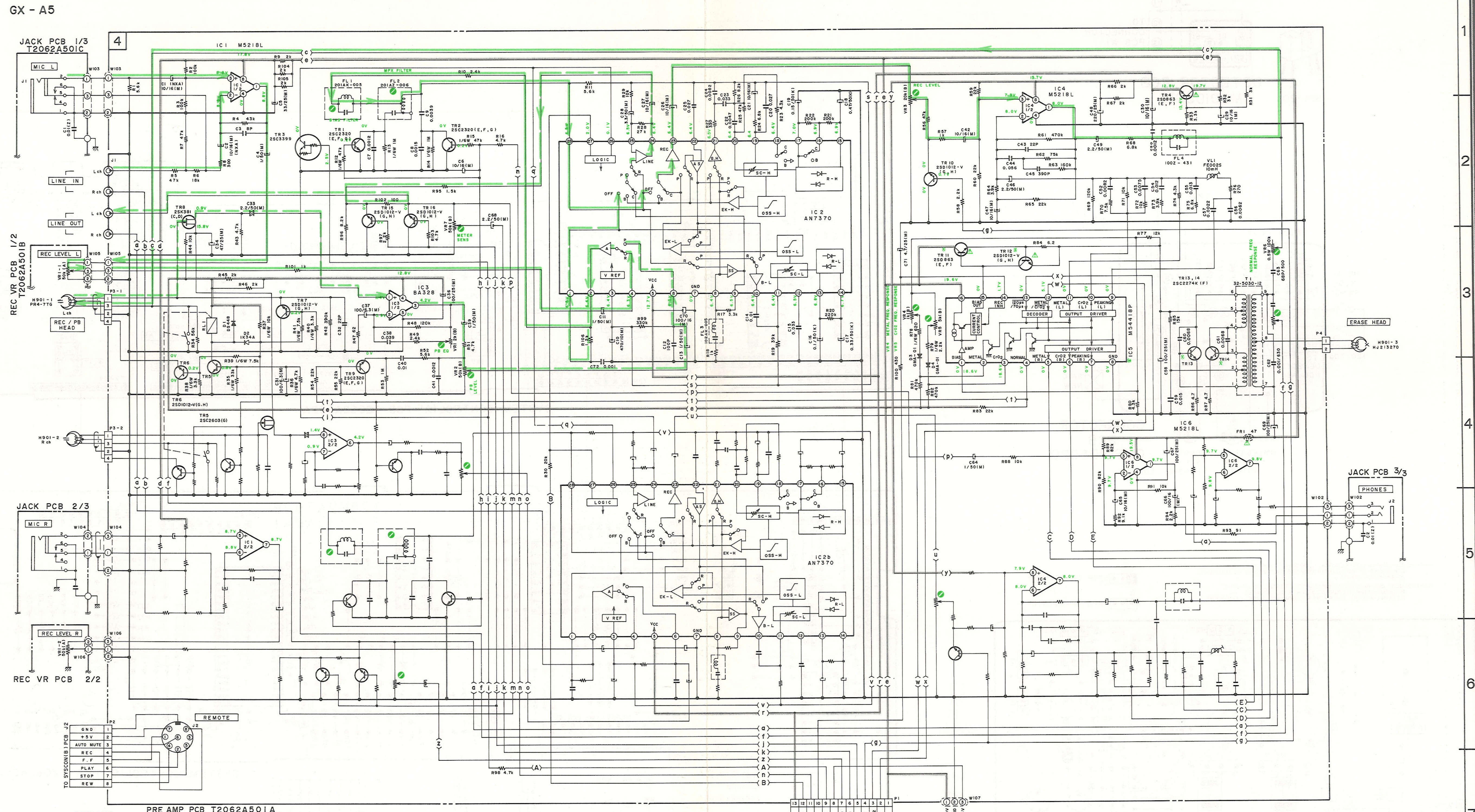


SYSTEM CONTROL(B) PCB T2062A502B

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

GX - A5


JACK PCB 1/3
T2062A501C
MIC L
IC1 M5218L
LINE IN
LINE OUT
L ch
R ch
REC VR PCB 1/2
T2062A501B
REC LEVEL L
VR1-1 50k(A)
H901-1 PR4-7TG
REC / PB HEAD
H901-2 R ch
JACK PCB 2/3
MIC R
REC LEVEL R
VR1-2 50k(A)
REC VR PCB 2/2
REMOTE
TO SYSCON(B) P2
GND 1
+5V 2
AUTO MUTE 3
REC 4
F.F 5
PLAY 6
STOP 7
REW 8
FL1 201AK-005
FL2 201AZ-006
MPX FILTER
TR1 2SC2320 (E,F,G)
TR2 2SC2320(E,F,G)
TR3 2SC3399
TR8 2SK381 (C,D)
TR15 2SD1012-V (G,H)
TR16 2SD1012-V (G,H)
METER SENS
IC3 BA328
TR7 2SD1012-V (G,H)
TR9 2SC2320 (E,F,G)
TR6 2SD1012-V(G,H)
TR5 2SC2603(G)
IC2 AN7370
IC2b AN7370
LOGIC
V REF
REC LEVEL
IC4 M5218L
TR4 2SD863 (E,F)
FL4 100Z-431
VL1 FE0025 10mH
TR10 2SD1012-V (G,H)
TR11 2SD863 (E,F)
TR12 2SD1012-V (G,H)
IC5 M54418P
DECODER
OUTPUT DRIVER
TR13, 14 2SC2274K (F)
T1 32-5030-12
NORMAL FREQ RESPONSE
ERASE HEAD
H901-3 HJ213270
IC6 M5218L
JACK PCB 3/3
PHONES
TO SYSCON J1
+13V
OFF/B/C
MPX
OSC
REC/PB
-6V
METER(L)
METER(R)
PB MUTE
REC MUTE
METAL/CrO2
120/70μ
+20V
TO POWER SUPPLY J2
+20V
GND
-6V
W107

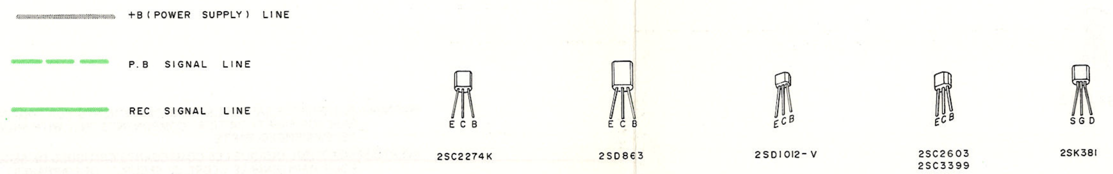
PRE AMP PCB T2062A501A

※ REC MODE

		NORMAL	CrO2	METAL
TR 11	E	5.9V	8.5V	15.3V
	C	19.8V	19.8V	19.7V
	B	6.4V	9.0V	15.9V
TR 12	E	5.7V	8.2V	14.8V
	C	6.4V	9.0V	15.9V
	B	5.9V	8.5V	15.3V
TR 13	E	0.1V	0.2V	0.2V
	C	5.7V	8.2V	14.8V
	B	0.2V	0V	0.7V
TR 14	E	0.1V	0.2V	0.2V
	C	5.7V	8.2V	14.8V
	B	0.2V	0V	0.7V

		NORMAL	CrO2	METAL
IC5	1	1.5V	1.5V	1.5V
	2	18.6V	18.7V	0V
	3	18.6V	0V	18.7V
	4	0V	6.9V	6.9V
	5	0V	0V	0V
	6	0V	0V	0V
	7	0V	0V	0V
	8	0V	0V	0V
	9	0V	0V	0V
	10	0V	0V	0V
	11	0V	0V	0V
	12	5.1V	0.1V	5.2V
	13	0V	5.2V	5.2V
	14	0V	0V	0V
	15	6.4V	9.0V	15.9V
	16	19.5V	19.5V	19.6V

001602


+B (POWER SUPPLY) LINE
P.B SIGNAL LINE
REC SIGNAL LINE
E C B
2SC2274K
2SD863
2SD1012-V
2SC2603
2SC3399
S G D
2SK381

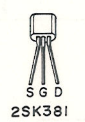
VOLTAGES ARE INDICATED AT PLAY MODE. (315Hz 0VU)

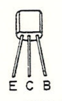
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV(J)

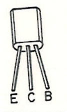
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

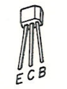
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

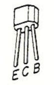
GX - A5 PRE AMP
SCHEMATIC DIAGRAM
NO. 2 - 2 841024B

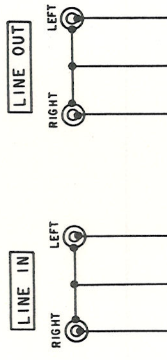
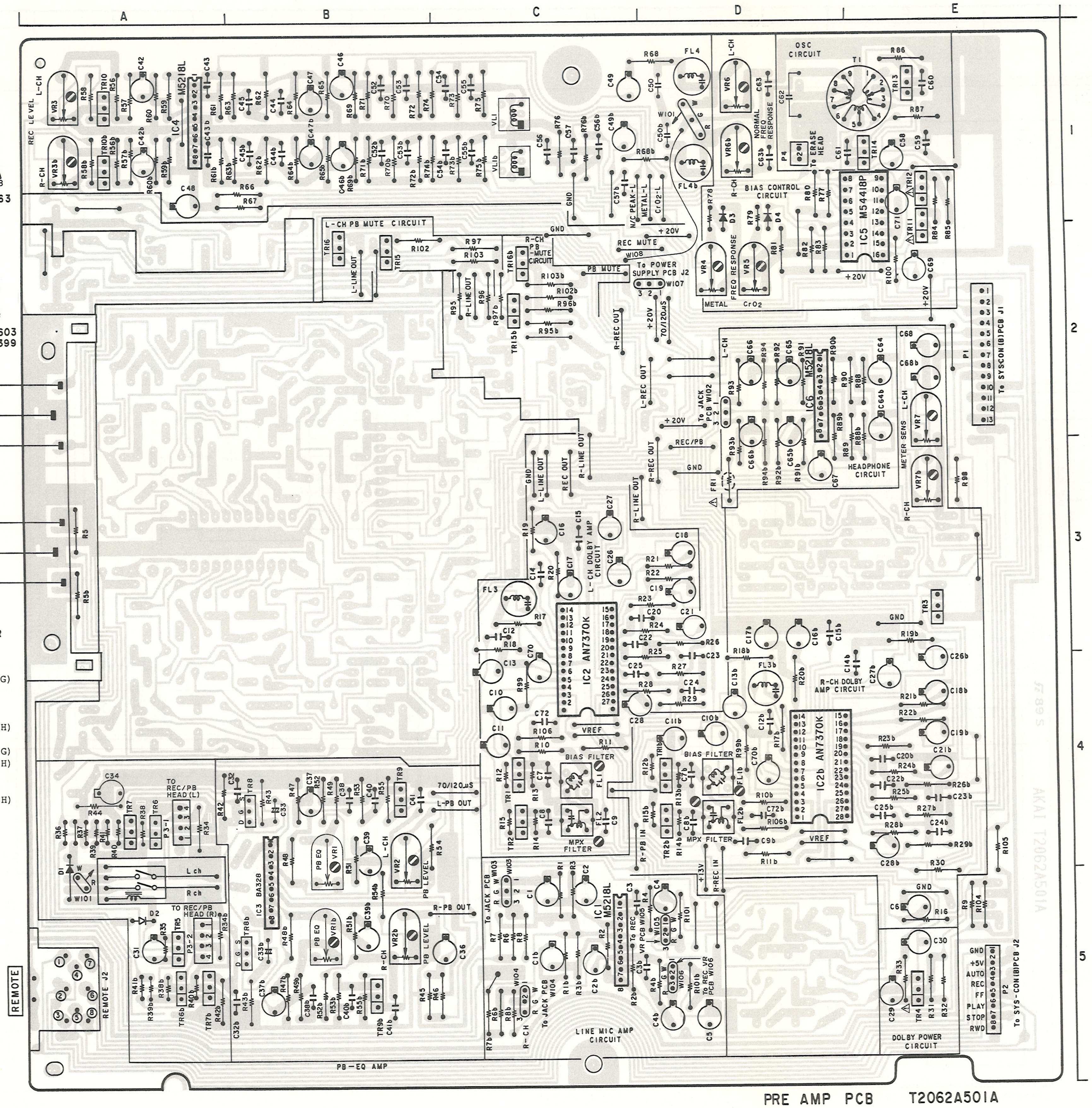

2SK381


2SC2274K
2SC2320


2SD863


2SD1012-V


2SC2603
2SC3399



A
B
C
D
E
1
2
3
4
5
LINE OUT
LEFT
RIGHT
LINE IN
LEFT
RIGHT
REMOTE
REMOTE J2
REC LEVEL
L-CH
R-CH
IC4 M5218L
L-CH PB MUTE CIRCUIT
R-CH PB MUTE CIRCUIT
PB MUTE
REC MUTE
To POWER SUPPLY PCB J2
OSC CIRCUIT
To ERASE HEAD
BIAS CONTROL CIRCUIT
IC5 M54418P
FREQ RESPONSE
NORMAL FREQ RESPONSE
METAL
CrO2
IC6 M5218L
HEADPHONE CIRCUIT
METER SENS
To SYSCON (B) PCB J1
L-CH DOLBY AMP CIRCUIT
IC2 AN7370K
R-CH DOLBY AMP CIRCUIT
IC2b AN7370K
BIAS FILTER
MPX FILTER
VREF
TO REC/PB HEAD (L)
TO REC/PB HEAD (R)
IC3 BA328
PB EQ
PB LEVEL
L-PB OUT
R-PB OUT
70/120µS
To JACK PCB W103
To JACK PCB W104
IC1 M5218L
To REC VR PCB W105
To REC VR PCB W106
LINE MIC AMP CIRCUIT
PB-EQ AMP
DOLBY POWER CIRCUIT
To SYS-CON (B) PCB J2
GND
+5V
AUTO
REC
FF
PLAY
STOP
RWD
AKAI T2062A501A

PRE AMP PCB T2062A501A

LOCATION OF COMPONENTS

IC's

- IC1 ----------- C5
- IC2 ----------- C3
- IC2b ---------- D4
- IC3 ----------- B4
- IC4 ----------- A1
- IC5 ----------- E1
- IC6 ----------- D2

TR's

- TR1,2 ---------- C4
- TR1b,2b -------- D4
- TR3 ------------ E3
- TR4 ------------ E5
- TR5 ------------ A5
- TR6,7 ---------- A4
- TR6b,7b -------- A5
- TR8,9 ---------- B4
- TR8b,9b -------- B5
- TR10,10b ------- A1
- TR11 to 14 ----- E1
- TR15,16 -------- B2
- TR15b,16b ------ C2

TERMINALS

- J1(LINE IN,LINE OUT JACKS)--A2,A3
- J2(REMOTE JACK)----A5
- P1 ------------ E2
- P2 ------------ E5
- P3-1 ---------- A4
- P3-2 ---------- A5
- P4 ------------ D1
- W102 ---------- C5
- W103,W104 ----- D5
- W105,W106 ----- C5
- W107 ---------- D2

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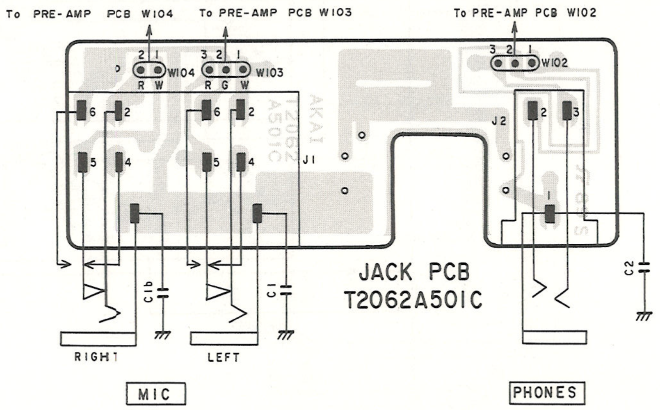
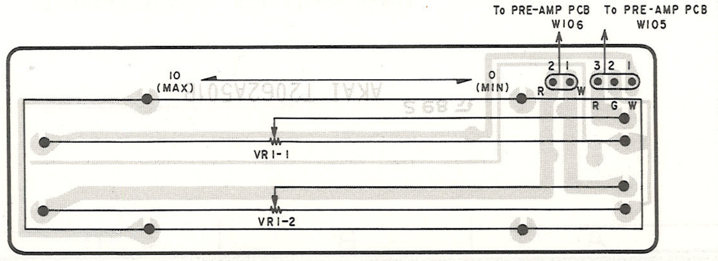
B
●●● = NPN TRANSISTOR

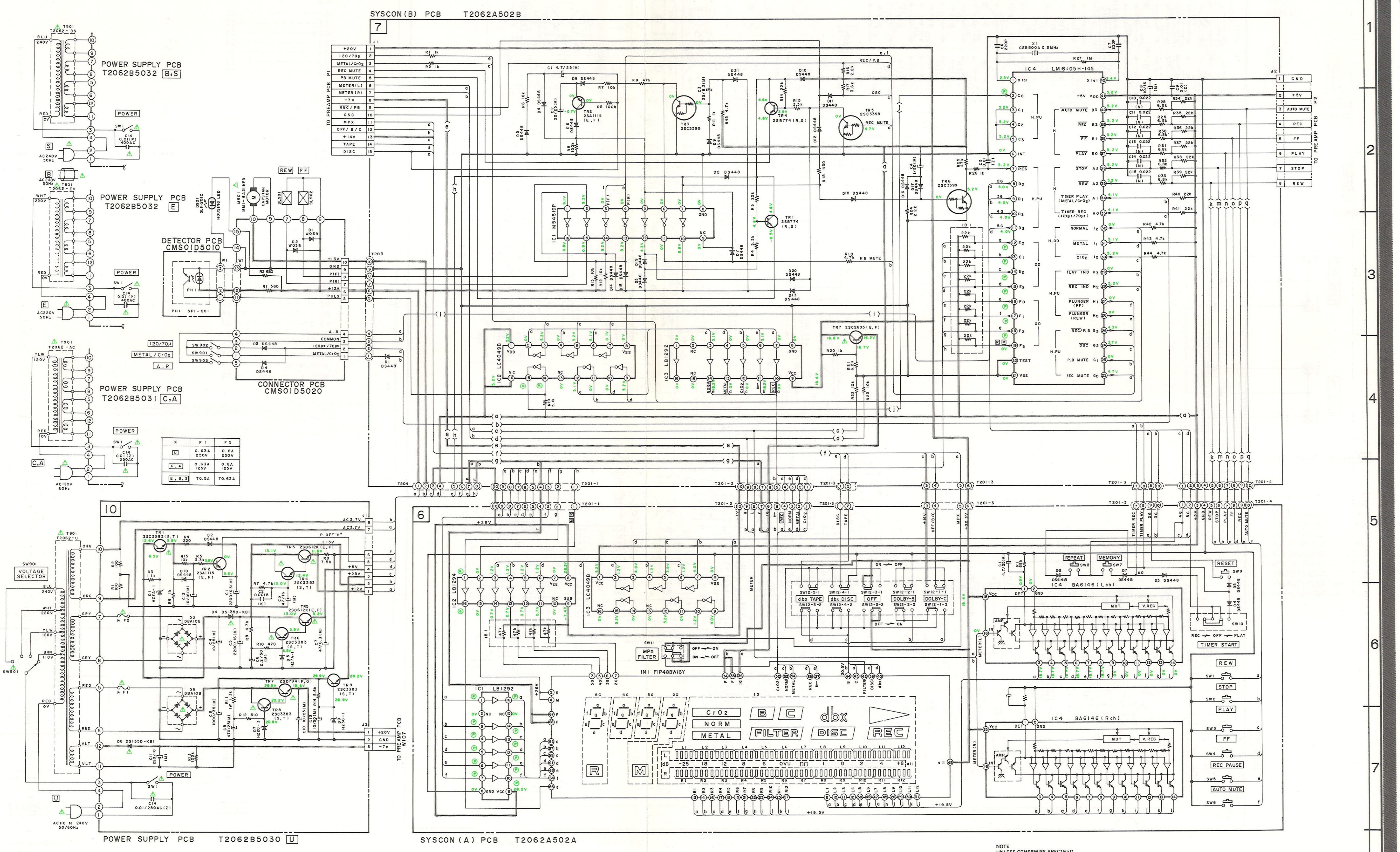
- TR1,2....2SC2320(E,F,G)
- TR3......2SC3399
- TR4......2SD863(E,F)
- TR5......2SC2603(G)
- TR6,7....2SD1012-V(G,H)
- TR8......2SK381(C,D)
- TR9......2SC2320(E,F,G)
- TR10,12..2SD1012-V(G,H)
- TR11.....2SD863(E,F)
- TR13,14..2SC2274K(F)
- TR15,16..2SD1012-V(G,H)


To PRE-AMP PCB W104
To PRE-AMP PCB W103
To PRE-AMP PCB W102
W104
W103
W102
R W
R G W
J1
J2
RIGHT
LEFT
MIC
PHONES
C1b
C1
C2
AKAI A2062 A501C

JACK PCB
T2062A501C


To PRE-AMP PCB W106
To PRE-AMP PCB W105
10 (MAX)
0 (MIN)
R W
R G W
VR1-1
VR1-2

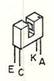
REC VR PCB T2062A501B


SYSCON (B) PCB T2062A502B
POWER SUPPLY PCB T2062B5032 B,S
POWER SUPPLY PCB T2062B5032 E
POWER SUPPLY PCB T2062B5031 C,A
DETECTOR PCB CMS01D5010
CONNECTOR PCB CMS01D5020
TO PREAMP PCB P1
TO PREAMP PCB P2
IC4 LM6405H-145
IC1 M54519P
IC2 LC4049B
IC3 LB1292
POWER SUPPLY PCB T2062B5030 U
SYSCON (A) PCB T2062A502A
IC4 BA6146 (Lch)
IC4 BA6146 (Rch)
IN1 FIP48BW16Y
VOLTAGE SELECTOR
TO PREAMP PCB W107
REW
STOP
PLAY
FF
REC PAUSE
AUTO MUTE
TIMER START
REPEAT
MEMORY
RESET

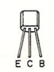
*	F1	F2
U	0.63A 250V	0.8A 250V
C,A	0.63A 125V	0.8A 125V
E,B,S	T0.5A	T0.63A

B (POWER SUPPLY) LINE

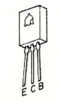
VOLTAGES ARE INDICATED AT PLAY MODE. (315Hz 0VU)



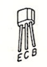
SPI-201



2SB774
2SC3383



2SD612K
2SD794



2SA1115
2SC2603
2SC3399

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
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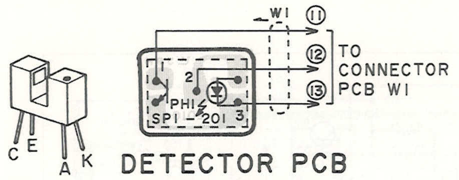
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

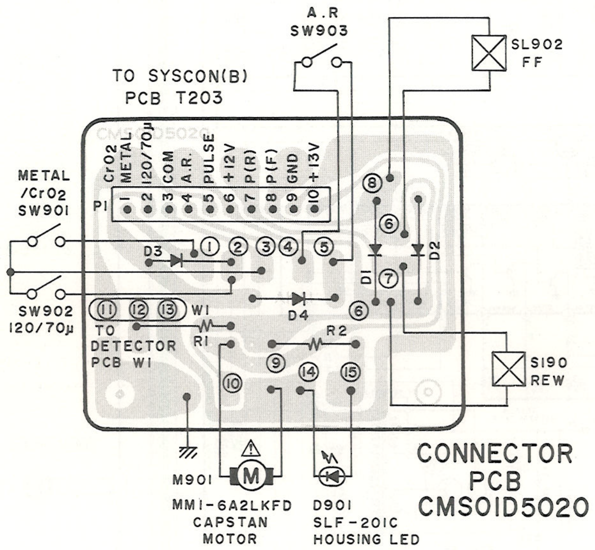
GX-A5X
POWER / S
SCHEMATIC DIAGRAM

NO. 2-1 841025B
3

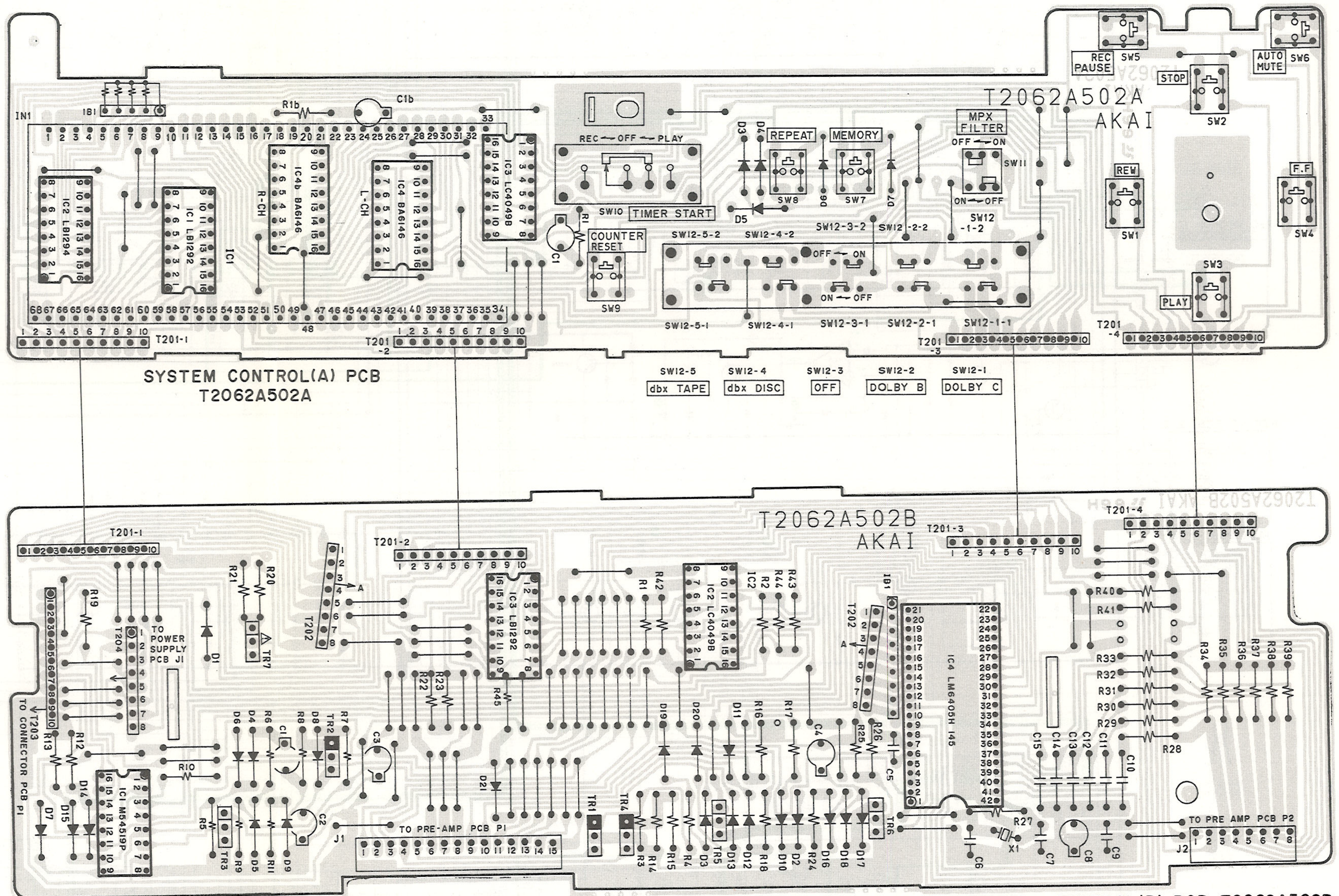
001603


W1
⑪
⑫
⑬
TO CONNECTOR PCB W1
PH1
SP1-201
C E A K
SP1-201

DETECTOR PCB
CMS01D5010


A.R
SW903
SL902
FF
TO SYSCON(B) PCB T203
METAL /CrO2 SW901
P1
CrO2
METAL 120/70μ
COM
A.R.
PULSE
+12V
P(R)
P(F)
GND
+13V
D3
D1
D2
D4
SW902 120/70μ
TO DETECTOR PCB W1
R1
R2
S190
REW
M901
MM1-6A2LKFD
CAPSTAN MOTOR
D901
SLF-201C
HOUSING LED

CONNECTOR PCB
CMS01D5020


T2062A502A
AKAI
IB1
IN1
R1b
C1b
IC2 LB1294
IC1 LB1292
IC4b BA6146
R-CH
L-CH
IC4 BA6146
IC3 LC4049B
REC — OFF — PLAY
SW10
TIMER START
COUNTER RESET
SW9
REPEAT
MEMORY
MPX FILTER
OFF — ON
SW11
SW12 -1-2
REC PAUSE
SW5
AUTO MUTE
SW6
STOP
SW2
REW
SW1
F.F
SW4
SW3
PLAY
T201-1
T201-2
T201-3
T201-4
SW12-5-2
SW12-4-2
SW12-3-2
SW12-2-2
SW12-5-1
SW12-4-1
SW12-3-1
SW12-2-1
SW12-1-1
SW12-5
dbx TAPE
SW12-4
dbx DISC
SW12-3
OFF
SW12-2
DOLBY B
SW12-1
DOLBY C
T2062A502B
AKAI
T204
TO POWER SUPPLY PCB J1
T203
TO CONNECTOR PCB P1
T202
IC1 M54519P
IC3 LB1292
IC2 LC4049B
IC4 LM6405H 145
J1
TO PRE-AMP PCB P1
J2
TO PRE AMP PCB P2
X1

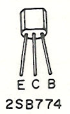
SYSTEM CONTROL(A) PCB
T2062A502A

SYSTEM CONTROL(B) PCB T2062A502B

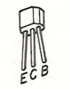
TR1------2SB774(R,S)
TR2----- 2SA1115(E,F)
TR3-----2SC3399
TR4-----2SB774(R,S)
TR5,6 --- 2SC3399
TR7-----2SC2603(E,F)

[• • •] = NPN
B

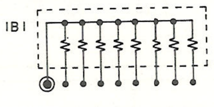
[■ • •] = PNP
B



2SB774



2SA1115
2SC2603
2SC3399

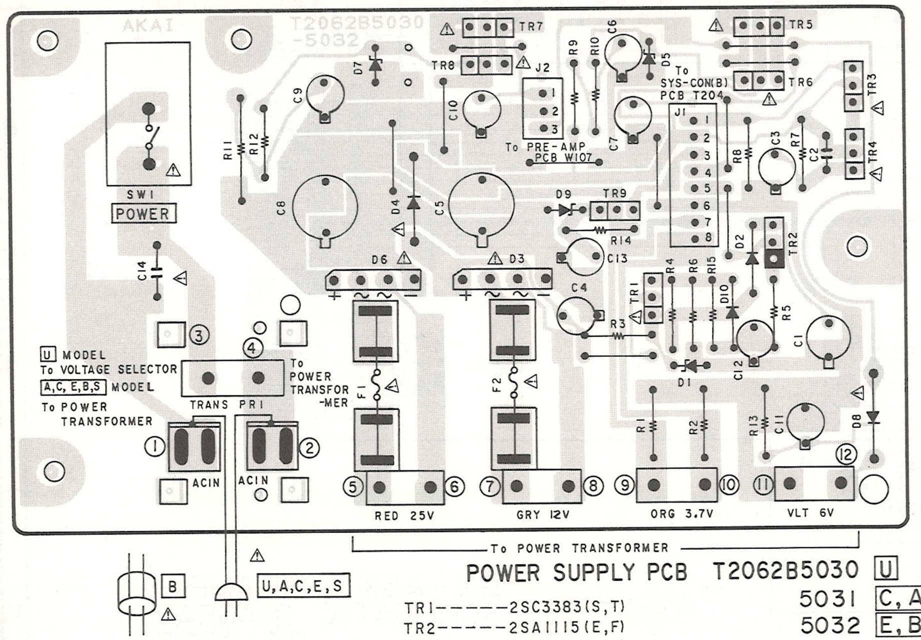


WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

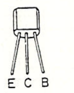
B
[■ • •]=PNP TRANSISTOR

B
[• • •]=NPN TRANSISTOR

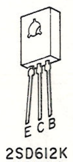

AKAI
T2062B5030 -5032
TR7
TR5
TR8
J2
TR6
TR3
TR4
To SYS-CON(B) PCB T204
To PRE-AMP PCB W107
J1
SW1
POWER
TR9
TR1
TR2
D6
D3
U MODEL To VOLTAGE SELECTOR
A,C,E,B,S MODEL To POWER TRANSFORMER
To POWER TRANSFORMER
TRANS PRI
ACIN
ACIN
F1
F2
RED 25V
GRY 12V
ORG 3.7V
VLT 6V
To POWER TRANSFORMER
B
U,A,C,E,S

POWER SUPPLY PCB T2062B5030 U
5031 C,A
5032 E,B,S

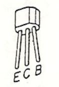
TR1------2SC3383(S,T)
TR2------2SA1115(E,F)
TR3,5----2SD612K(E,F)
TR4,6----2SC3383(S,T)
TR7------2SD794(P,Q)
TR8,9----2SC3383(S,T)



2SC3383



2SD612K
2SD794



2SA1115

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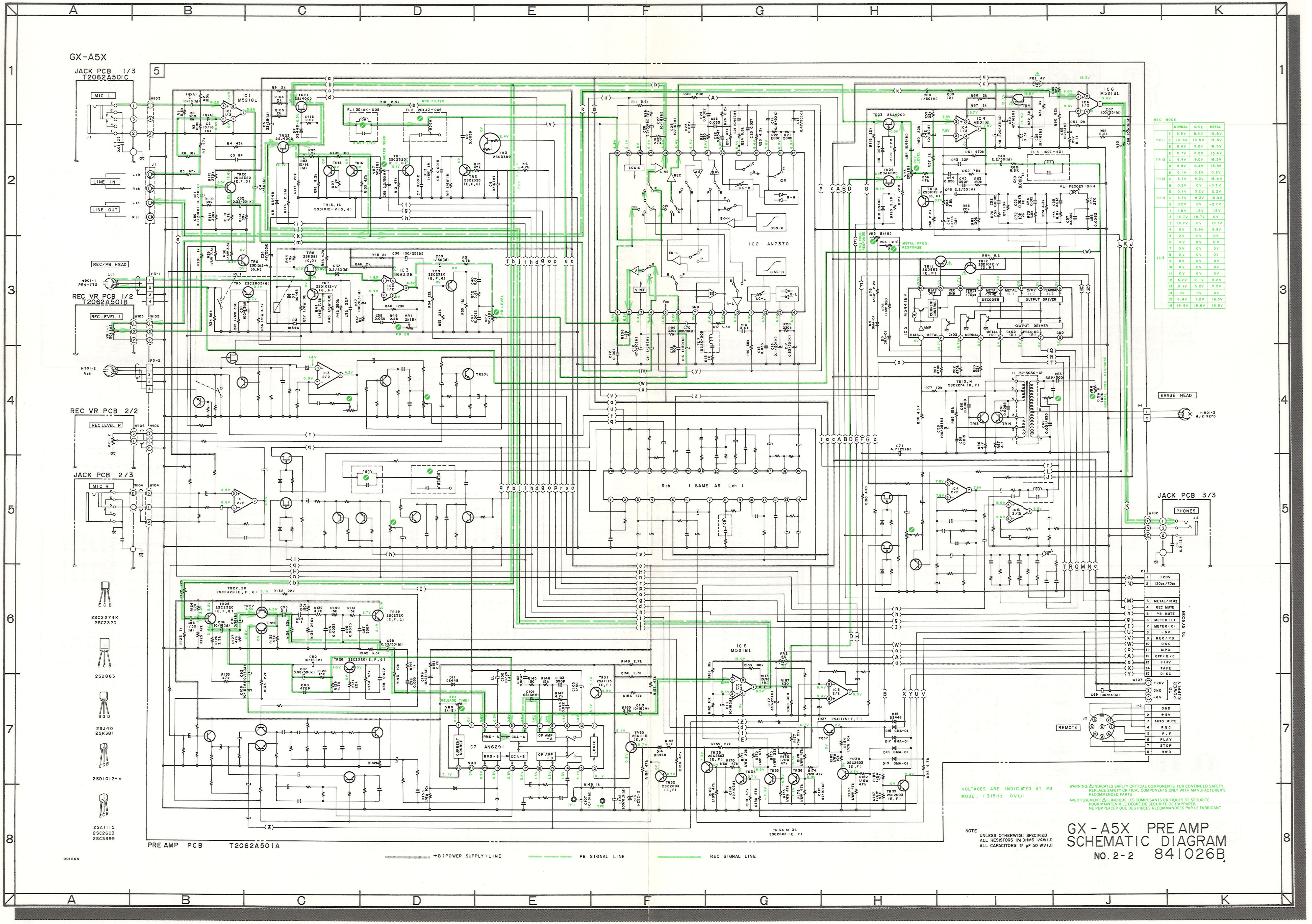
GX-A5X
JACK PCB 1/3
T2062A501C
MIC L
LINE IN
LINE OUT
REC/PB HEAD
H901-1 PR4-7TG
REC VR PCB 1/2
T2062A501B
REC LEVEL L
H901-2
REC VR PCB 2/2
REC LEVEL R
JACK PCB 2/3
MIC R
IC1 M5218L
IC2 AN7370
IC3 BA328
IC4 M5218L
IC5 M54418P
IC6 M5218L
IC7 AN6291
IC8 M5218L
FL1 20(AK-005
FL2 20(AZ-006
MPX FILTER
BIAS FILTER
METER SENS
PB LEVEL
PB EQ
REC LEVEL
METAL FREQ. RESPONSE
NORMAL FREQ. RESPONSE
CrO2 FREQ. RESPONSE
RELEASE TIME
Rch (SAME AS Lch)
ERASE HEAD
H901-3 HJ213270
JACK PCB 3/3
PHONES
REMOTE
TO SYSCON
TO POWER SUPPLY
2SC2274K
2SC2320
2SD863
2SJ40
2SK381
2SD1012-V
2SA1115
2SC2603
2SC3399
PRE AMP PCB T2062A501A
001604
+B (POWER SUPPLY) LINE
PB SIGNAL LINE
REC SIGNAL LINE

REC MODE

		NORMAL	CrO2	METAL
TR11	E	5.9V	8.4V	15.9V
	C	19.6V	19.5V	19.5V
	B	6.4V	9.0V	16.5V
TR12	E	5.7V	8.2V	15.4V
	C	6.4V	9.0V	16.5V
	B	5.9V	8.4V	15.9V
TR13	E	0.1V	0.2V	0.2V
	C	5.7V	8.2V	15.4V
	B	0.2V	0V	-0.7V
TR14	E	0.1V	0.2V	0.2V
	C	5.7V	8.2V	15.4V
	B	0.2V	0V	-0.7V
IC5	1	1.5V	1.5V	1.5V
	2	18.7V	18.7V	0V
	3	18.7V	0V	18.7V
	4	0V	6.9V	6.9V
	5	0V	0V	0V
	6	0V	0V	0V
	7	0V	0V	0V
	8	0V	0V	0V
	9	0V	0V	0V
	10	0V	0V	0V
	11	0V	0V	0V
	12	5.2V	0.1V	5.2V
	13	0.1V	5.2V	5.2V
	14	0V	0V	0V
	15	6.4V	9.0V	16.5V
	16	19.6V	19.6V	19.6V

VOLTAGES ARE INDICATED AT PB MODE. (315Hz 0VU)

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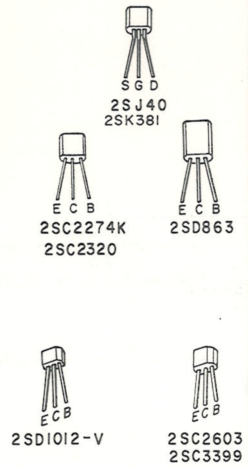
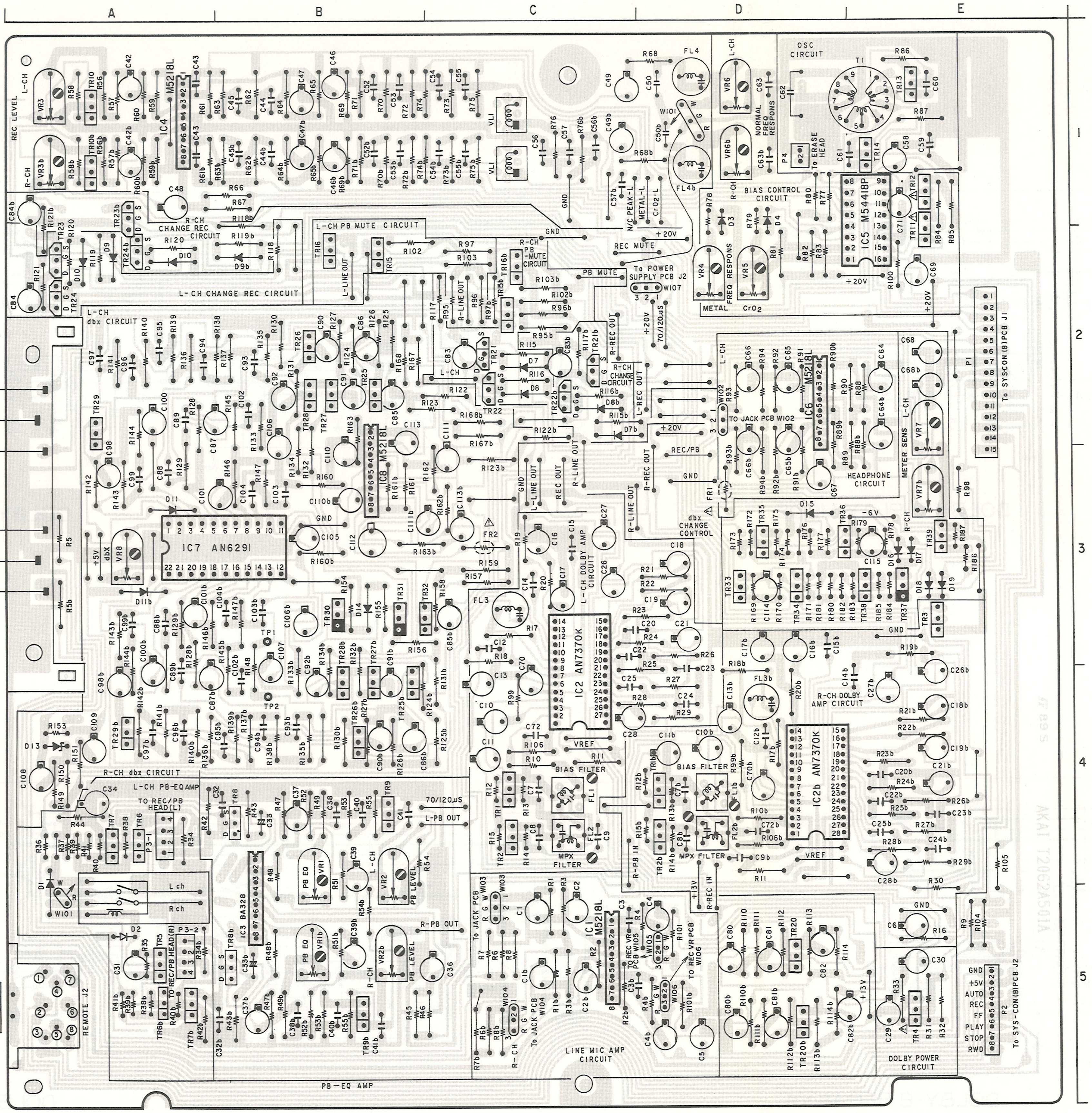
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF 50 WV (J)

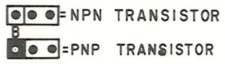
GX-A5X PRE AMP SCHEMATIC DIAGRAM

NO. 2-2 841026B


S G D
2SJ40
2SK381
E C B
2SC2274K
2SC2320
E C B
2SD863
E C B
2SD1012-V
E C B
2SC2603
2SC3399
2SA1115


A
B
C
D
E
1
2
3
4
5
LINE OUT
LEFT
RIGHT
LINE IN
LEFT
RIGHT
REMOTE
REMOTE J2
REC LEVEL
L-CH
R-CH
IC4 M5218L
L-CH CHANGE REC CIRCUIT
R-CH CHANGE REC CIRCUIT
L-CH PB MUTE CIRCUIT
R-CH PB-MUTE CIRCUIT
PB MUTE
REC MUTE
To POWER SUPPLY PCB J2
L-CH dbx CIRCUIT
R-CH dbx CIRCUIT
IC7 AN6291
IC8 M5218L
IC6 M5218L
IC5 M5418P
OSC CIRCUIT
BIAS CONTROL CIRCUIT
TO ERASE HEAD
NORMAL FREQ RESPONS
FREQ RESPONS
METAL
CrO2
METAL-L
CrO2-L
N/C PEAK-L
HEADPHONE CIRCUIT
METER SENS
To SYSCON (B) PCB J1
TO JACK PCB W102
dbx CHANGE CONTROL
L-CH DOLBY AMP CIRCUIT
IC2 AN7370K
R-CH DOLBY AMP CIRCUIT
IC2b AN7370K
BIAS FILTER
MPX FILTER
VREF
L-CH PB-EQ AMP
TO REC/PB HEAD(L)
TO REC/PB HEAD(R)
IC3 BA328
PB EQ
PB LEVEL
L-PB OUT
R-PB OUT
70/120µS
TO JACK PCB W103
TO JACK PCB W104
IC1 M5218L
TO REC VR PCB W105
TO REC VR PCB W106
LINE MIC AMP CIRCUIT
DOLBY POWER CIRCUIT
GND
+5V
AUTO
REC
FF
PLAY
STOP
RWD
P2 To SYS-CON (B) PCB J2
PB-EQ AMP
AKAI T2062A501A
+20V
+13V
-6V

PRE AMP PCB T2062A501A



=NPN TRANSISTOR

=PNP TRANSISTOR

TR1,2......2SC2320(E,F,G)
TR3........2SC3399
TR4........2SD863(E,F)
TR5........2SC2603(G)
TR6,7......2SD1012-V(G,H)
TR8........2SK381
TR9........2SC2320(E,F,G)
TR10,12....2SD1012-V(G,H)
TR11.......2SD863(E,F)
TR13,14....2SC2274K(F)
TR15,16....2SD1012-V(G,H)
TR20.......2SC2320(E,F,G)
TR21 to 24.2SJ40(C,D)
TR25 to 29.2SC2320(E,F,G)
TR30,31....2SA1115(E,F)
TR32 to 36.2SC2603(E,F)
TR37.......2SA1115(E,F)
TR38,39....2SC2603(E,F)

LOCATION OF COMPONENTS

IC's

IC1 ------------ C5
IC2 ------------ C3
IC2b ----------- D4
IC3 ------------ B4
IC4 ------------ A1
IC5 ------------ E1
IC6 ------------ D2
IC7 ------------ A3
IC8 ------------ B3

TR's

TR1,2 ----------- C4
TR1b,2b --------- D4
TR3 ------------- E3
TR4 ------------- E5
TR5 ------------- A5
TR6,7 ----------- A4
TR6b,7b --------- A5
TR8,9 ----------- B4
TR8b,9b --------- B5
TR10,10b -------- A1
TR11 to 14 ------ E1
TR15,16 --------- B2
TR15b,16b ------- C2
TR20,20b ---- D5
TR21,22,21b,22b -- C2
TR23,24 ----- A2
TR23b,24b ---- A1
TR25 to 28 --- B2
TR25b ------ B3
TR26b ------ B4
TR27b,28b --- B3
TR29 ------ A2
TR29b ------ A4
TR30 to 32 --- B3
TR33 to 36 --- D3
TR37 to 39 --- E3

TERMINALS

J1 (LINE IN, LINE OUT JACKS) -- A2, A3
J2 (REMOTE JACK) ---- A5
P1 ------------ E2
P2 ------------ E5
P3-1 ----------- A4
P3-2 ----------- A5
P4 ------------ D1
W102 ----------- D2
W103, W104 -------- C5
W105, W106 -------- D5
W107 ----------- D2

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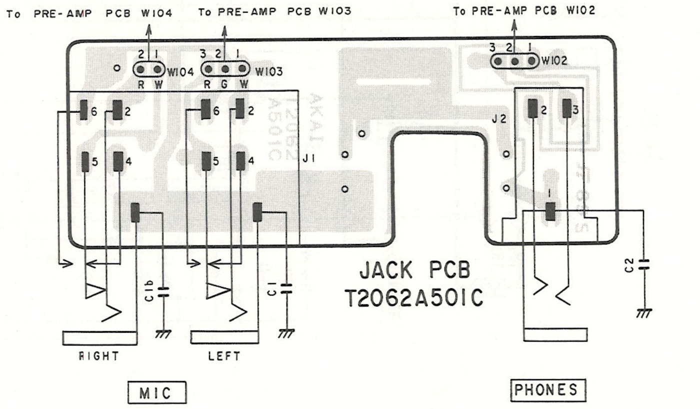
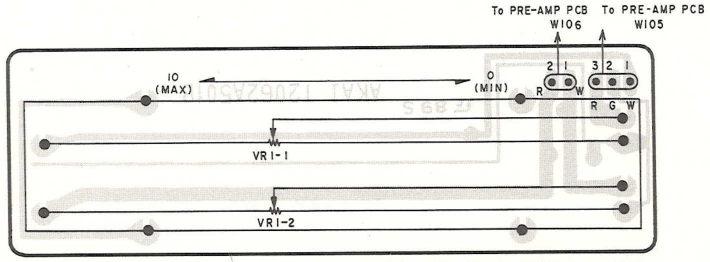
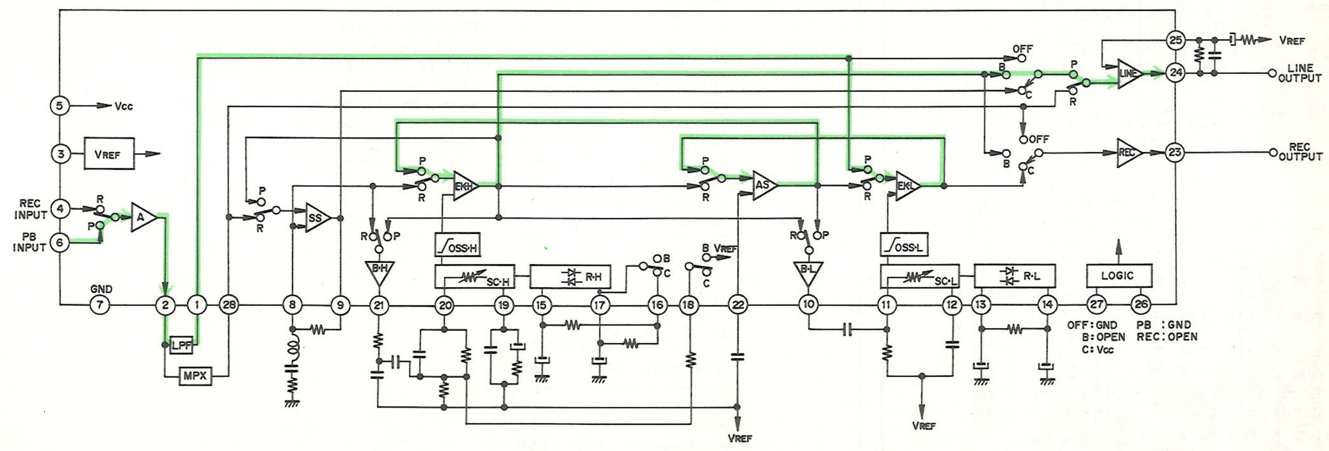

To PRE-AMP PCB W104
To PRE-AMP PCB W103
To PRE-AMP PCB W102
W104
W103
W102
R W
R G W
J1
J2
RIGHT
LEFT
MIC
PHONES
C1b
C1
C2

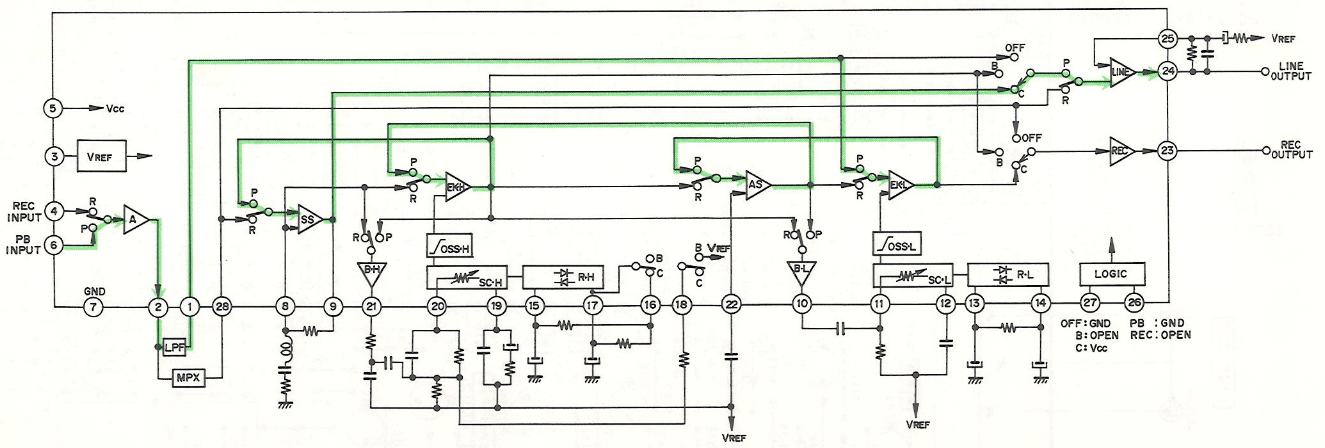
JACK PCB T2062A501C


To PRE-AMP PCB W106
To PRE-AMP PCB W105
10 (MAX)
0 (MIN)
R W
R G W
VR1-1
VR1-2

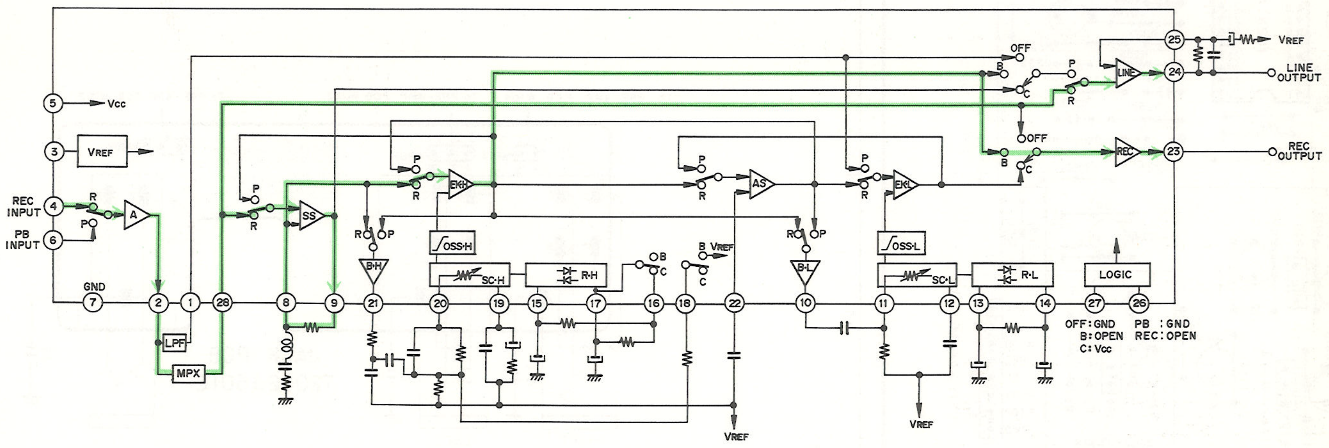
REC VR PCB T2062A501B


Vcc
VREF
REC INPUT
PB INPUT
GND
A
LPF
MPX
SS
EXH
AS
EXL
LINE
REC
LINE OUTPUT
REC OUTPUT
OFF
B
C
P
R
∫OSS·H
SC·H
R·H
B·H
∫OSS·L
SC·L
R·L
B·L
LOGIC
OFF:GND
B:OPEN
C:Vcc
PB :GND
REC:OPEN

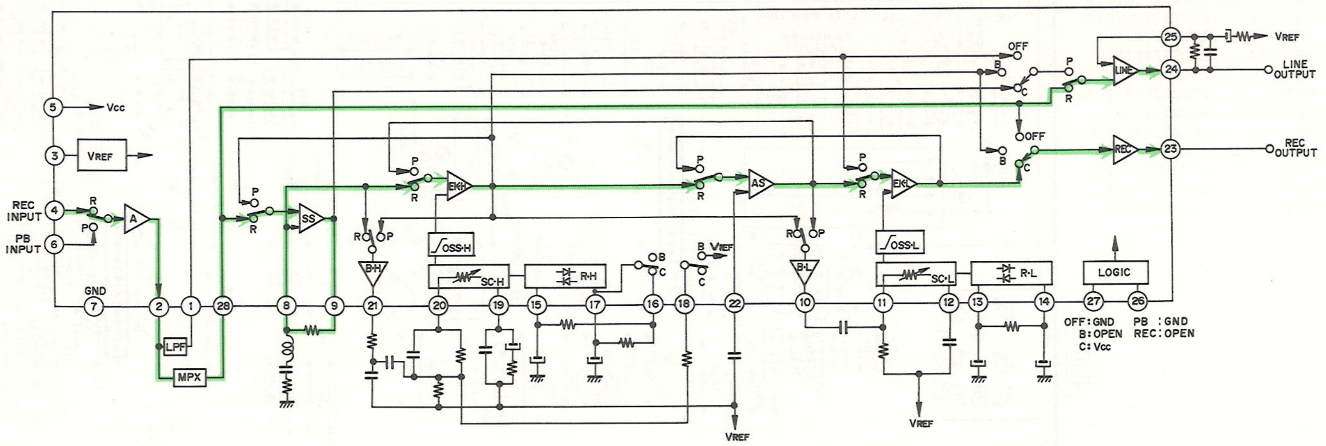
DOLBY-B PLAY MODE


Vcc
VREF
REC INPUT
PB INPUT
GND
A
LPF
MPX
SS
EXH
AS
EXL
LINE
REC
LINE OUTPUT
REC OUTPUT
OFF
B
C
P
R
∫OSS·H
SC·H
R·H
B·H
∫OSS·L
SC·L
R·L
B·L
LOGIC
OFF:GND
B:OPEN
C:Vcc
PB :GND
REC:OPEN

DOLBY-C PLAY MODE


Vcc
VREF
REC INPUT
PB INPUT
GND
A
LPF
MPX
SS
EXH
AS
EXL
LINE
REC
LINE OUTPUT
REC OUTPUT
OFF
B
C
P
R
∫OSS·H
SC·H
R·H
B·H
∫OSS·L
SC·L
R·L
B·L
LOGIC
OFF:GND
B:OPEN
C:Vcc
PB :GND
REC:OPEN

DOLBY-B REC MODE


Vcc
VREF
REC INPUT
PB INPUT
GND
A
LPF
MPX
SS
EXH
AS
EXL
LINE
REC
LINE OUTPUT
REC OUTPUT
OFF
B
C
P
R
∫OSS·H
SC·H
R·H
B·H
∫OSS·L
SC·L
R·L
B·L
LOGIC
OFF:GND
B:OPEN
C:Vcc
PB :GND
REC:OPEN

DOLBY-C REC MODE